JVC

MODEL XL-V1

COMPACT DISC PLAYER

COMPACT disc DIGITAL AUDIO

SERVICE MANUAL

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1. Printed Circuit Board Ass'y and Parts List

1-(1) PA P.C. Board Ass'y (EGH4996594)

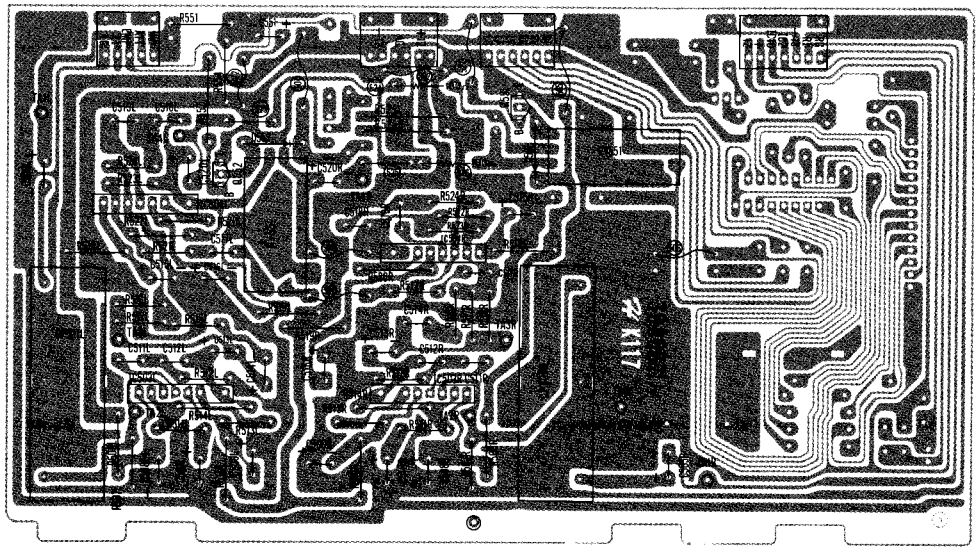


Fig. 1

Transistors

Item No.	Part Number	Rating	Description	Maker
Q551	2SC458(C)		Silicon	Hitachi
Q552	2SC458(C)		Silicon	Hitachi

I.C.s

Item No.	Part Number	Rating	Description	Maker
IC503L	HA12017		I.C.	Hitachi
IC503R	HA12017		I.C.	Hitachi
IC504L	HA12017		I.C.	Hitachi
IC504R	HA12017		I.C.	Hitachi

Diodes

Item No.	Part Number	Rating	Description	Maker
D551	1S2076		Silicon	Hitachi
D552	1S2076		Silicon	Hitachi

Capacitors

Item No.	Part Number	Rating		Description
C505L	QET51CM-107	100MF	16V	Electrolytic
C505R	QET51CM-107	100MF	16V	Electrolytic
C508L	QET51CM-107	100MF	16V	Electrolytic
C508R	QET51CM-107	100MF	16V	Electrolytic
C509L	QET51CM-107	100MF	16V	Electrolytic
C509R	QET51CM-107	100MF	16V	Electrolytic
C510L	QET51CM-476	47MF	16V	Electrolytic
C510R	QET51CM-476	47MF	16V	Electrolytic
C511L	QCS21HJ-101	100pF	50V	Ceramic
C511R	QCS21HJ-101	100pF	50V	Ceramic
C512L	QCY41HK-471	470pF	50V	Ceramic
C512R	QCY41HK-471	470pF	50V	Ceramic
C513L	QET51CM-107	100MF	16V	Electrolytic
C513R	QET51CM-107	100MF	16V	Electrolytic
C514L	QFN41HK-152	1500pF	50V	Mylar
C514R	QFN41HK-152	1500pF	50V	Mylar
C515L	QET51CM-107	100MF	16V	Electrolytic
C515R	QET51CM-107	100MF	16V	Electrolytic
C516L	QET51CM-107	100MF	16V	Electrolytic
C516R	QET51CM-107	100MF	16V	Electrolytic
C517L	QFN41HK-103	0.01MF	50V	Mylar
C517R	QFN41HK-103	0.01MF	50V	Mylar
C518L	QCY41HK-471	470pF	50V	Ceramic
C518R	QCY41HK-471	470pF	50V	Ceramic
C519L	QCS21HJ-101	100pF	50V	Ceramic
C519R	QCS21HJ-101	100pF	50V	Ceramic
C520L	QET51CM-107	100MF	16V	Electrolytic
C520R	QET51CM-107	100MF	16V	Electrolytic
C551	QET51CM-106	10MF	16V	Electrolytic

Resistors

Item No.	Part Number	Rating		Description
R507L	QRD141J-562S	5.6K	1/4W	Carbon
R507R	QRD141J-562S	5.6K	1/4W	Carbon
R509L	QRZ0052-331	330	1/4W	Fusible
R509R	QRZ0052-331	330	1/4W	Fusible
R510L	QRZ0052-331	330	1/4W	Fusible
R510R	QRZ0052-331	330	1/4W	Fusible
R511L	QRD141J-182S	1.8K	1/4W	Carbon
R511R	QRD141J-182S	1.8K	1/4W	Carbon
R512L	QRD141J-152S	1.5K	1/4W	Carbon
R512R	QRD141J-152S	1.5K	1/4W	Carbon
R513L	QRD141J-183S	18K	1/4W	Carbon
R513R	QRD141J-183S	18K	1/4W	Carbon
R514L	QRD141J-123S	12K	1/4W	Carbon
R514R	QRD141J-123S	12K	1/4W	Carbon
R515L	QRD141J-562S	5.6K	1/4W	Carbon
R515R	QRD141J-562S	5.6K	1/4W	Carbon
R516L	QRD141J-392S	3.9K	1/4W	Carbon
R516R	QRD141J-392S	3.9K	1/4W	Carbon
R517L	QRD141J-333S	33K	1/4W	Carbon
R517R	QRD141J-333S	33K	1/4W	Carbon
R518L	QRZ0052-331	330	1/4W	Fusible
R518R	QRZ0052-331	330	1/4W	Fusible
R519L	QRZ0052-331	330	1/4W	Fusible
R519R	QRZ0052-331	330	1/4W	Fusible
R520L	QRD141J-183S	18K	1/4W	Carbon
R520R	QRD141J-183S	18K	1/4W	Carbon
R521L	QRD141J-152S	1.5K	1/4W	Carbon
R521R	QRD141J-152S	1.5K	1/4W	Carbon
R522L	QRD141J-392S	3.9K	1/4W	Carbon
R522R	QRD141J-392S	3.9K	1/4W	Carbon
R523L	QRD141J-333S	33K	1/4W	Carbon
R523R	QRD141J-333S	33K	1/4W	Carbon
R524L	QRD141J-152S	1.5K	1/4W	Carbon
R524R	QRD141J-152S	1.5K	1/4W	Carbon
R525L	QRD141J-472S	4.7K	1/4W	Carbon
R525R	QRD141J-472S	4.7K	1/4W	Carbon
R551	QRD141J-103S	10K	1/4W	Carbon
R552	QRD141J-103S	10K	1/4W	Carbon
R554	QRD141J-272S	2.7K	1/4W	Carbon

Others

Item No.	Part Number	Description
CP501L	EGH2136371	Low-pass filter
CP501R	EGH2136371	Low-pass filter
RY551	EGH2647151	Lead relay
RY552	EGH2647151	Lead relay

1-(2) PC P.C. Board Ass'y

(EGH2597784) : for U.S.A. & Canada
(EGH2597785) : for Europe, U.K. & West Germany
(EGH2597786) : for Other Countries

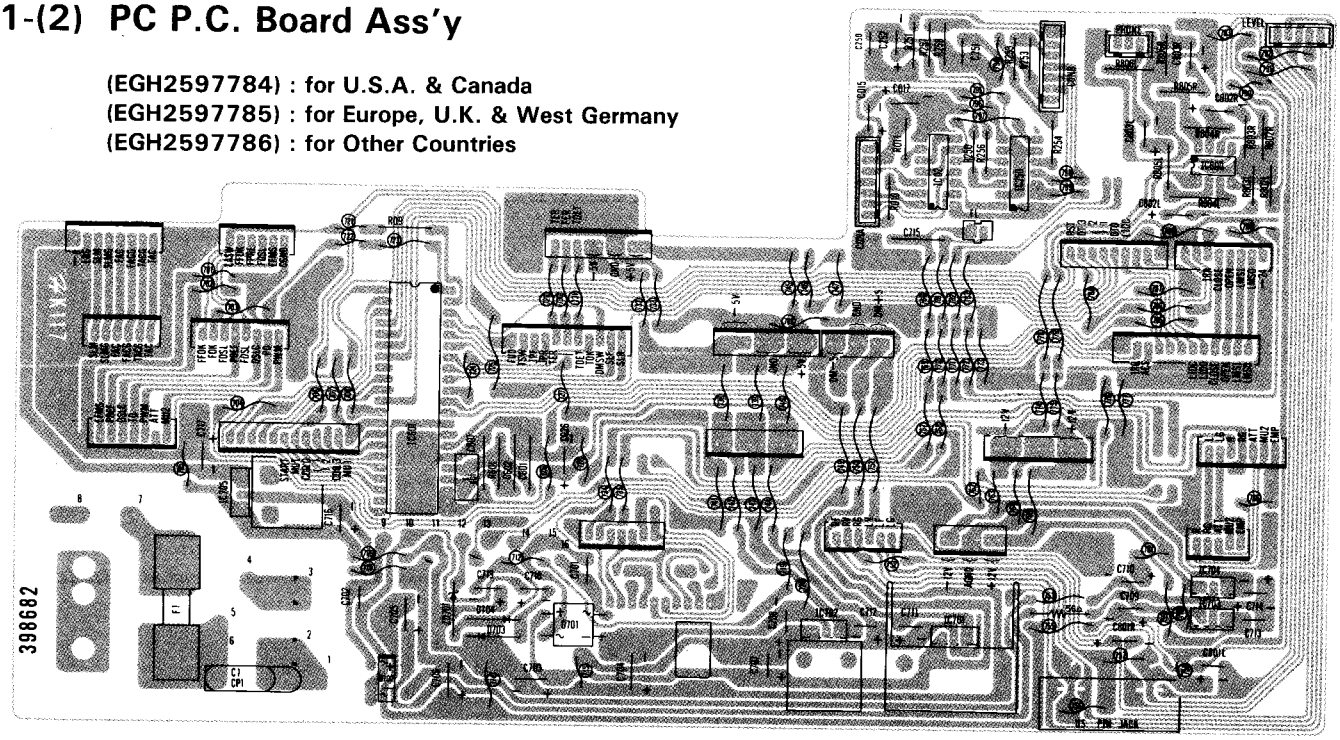


Fig. 2

I.C.s

Item No.	Part Number	Rating	Description	
				Maker
IC02	TC4069UBP		I.C.	Toshiba
IC250	TC4001BP		I.C.	Toshiba
IC601	HD44801A95		I.C.	Hitachi
IC701	HA17805P		I.C.	Hitachi
IC702	UPC7905H		I.C.	NEC
IC703	HA17812P		I.C.	Hitachi
IC704	UPC7912H		I.C.	NEC
IC705	UPC7908H		I.C.	NEC
IC800	UPC4557C		I.C.	NEC

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D701	ESAB03-01B1		Silicon	Fujidenki
D702	S1WB-20		Silicon	Shindengen
D703	ERB12-01R		Silicon	Fujidenki
D704	ERB12-01R		Silicon	Fujidenki
ZD701	RD5.1EN1		Zener	NEC

Resistors

Item No.	Part Number	Rating		Description
R09	QRD141J-103S	10K	1/4W	Carbon
R010	QRD141J-333S	33K	1/4W	Carbon
R011	QRD141J-333S	33K	1/4W	Carbon
R250	QRD141J-153S	15K	1/4W	Carbon
R251	QRD141J-153S	15K	1/4W	Carbon
R253	QRD141J-104S	100K	1/4W	Carbon
R254	QRD141J-153S	15K	1/4W	Carbon
R255	QRD141J-153S	15K	1/4W	Carbon
R256	QRD141J-473S	47K	1/4W	Carbon
R257	QRD141J-473S	47K	1/4W	Carbon
R258	QRD141J-104S	100K	1/4W	Carbon
R601	QRD141J-105S	1M	1/4W	Carbon
R701	QRZ0050-150	15	1/2W	Fusible
R802L	QRD141J-563S	56K	1/4W	Carbon
R802R	QRD141J-563S	56K	1/4W	Carbon
R803L	QRD141J-392S	3.9K	1/4W	Carbon
R803R	QRD141J-392S	3.9K	1/4W	Carbon
R804L	QRD141J-332S	3.3K	1/4W	Carbon
R804R	QRD141J-332S	3.3K	1/4W	Carbon
R805L	QRZ0052-101	100	1/4W	Fusible
R805R	QRZ0052-101	100	1/4W	Fusible
R806L	QRD141J-104S	100K	1/4W	Carbon
R806R	QRD141J-104S	100K	1/4W	Carbon

Capacitors

Item No.	Part Number	Rating		Description
C015	QET51CM-106	10MF	16V	Electrolytic
C017	QET51CM-106	10MF	16V	Electrolytic
C250	QFN41HK-223	0.022MF	50V	Mylar
C251	QFN41HK-223	0.022MF	50V	Mylar
C252	QET51EM-224	0.22MF	25V	Electrolytic
C601	QCY41HK-222	2200pF	50V	Ceramic
C602	QCY41HK-471	470pF	50V	Ceramic
C607	QCY41HK-103	0.01MF	50V	Ceramic
C626	QET50JM-476	47MF	6.3V	Electrolytic
C701	QCF21HP-103	0.01MF	50V	Ceramic
C702	QCF21HP-103	0.01MF	50V	Ceramic
C703	QET51CM-228	2200MF	16V	Electrolytic
C704	QET51CM-228	2200MF	16V	Electrolytic
C705	QET51EM-108	1000MF	25V	Electrolytic
C706	QET51EM-108	1000MF	25V	Electrolytic
C707	QET51HM-474	0.47MF	50V	Electrolytic
C708	QET51HM-474	0.47MF	50V	Electrolytic
C709	QET51HM-474	0.47MF	50V	Electrolytic
C710	QET51HM-474	0.47MF	50V	Electrolytic
C711	QET51HM-474	0.47MF	50V	Electrolytic
C712	QET51HM-474	0.47MF	50V	Electrolytic
C713	QET51HM-474	0.47MF	50V	Electrolytic
C714	QET51HM-474	0.47MF	50V	Electrolytic
C715	QCY41HK-103	0.01MF	50V	Ceramic
C716	QET51HM-474	0.47MF	50V	Electrolytic
C717	QET51HM-474	0.47MF	50V	Electrolytic
C718	QET51HM-225	2.2MF	50V	Electrolytic
C719	QET51HM-107	100MF	50V	Electrolytic
C740	QET51HM-105	1MF	50V	Electrolytic
C741	QET51HM-105	1MF	50V	Electrolytic
C801L	QET51CM-107	100MF	16V	Electrolytic
C801R	QET51CM-107	100MF	16V	Electrolytic
C802L	QET51CM-476	47MF	16V	Electrolytic
C802R	QET51CM-476	47MF	16V	Electrolytic
C803L	QET51CM-107	100MF	16V	Electrolytic
C803R	QET51CM-107	100MF	16V	Electrolytic
C820	QET51CM-106	10MF	16V	Electrolytic
C821	QET51CM-106	10MF	16V	Electrolytic

Others

Item No.	Part Number	Description
X601	EGH2154421	Ceramic oscillator
CP1	EGH0269014	Spark killer
F1	QMF61U1-R50	Fuse primary (for U.S.A. & Canada)
F1	QMF51A2-R50L	Fuse primary (except U.S.A. & Canada)
	EGH2677394	US Pin jack

1-(3) PD P.C. Board Ass'y (EGH4996593)

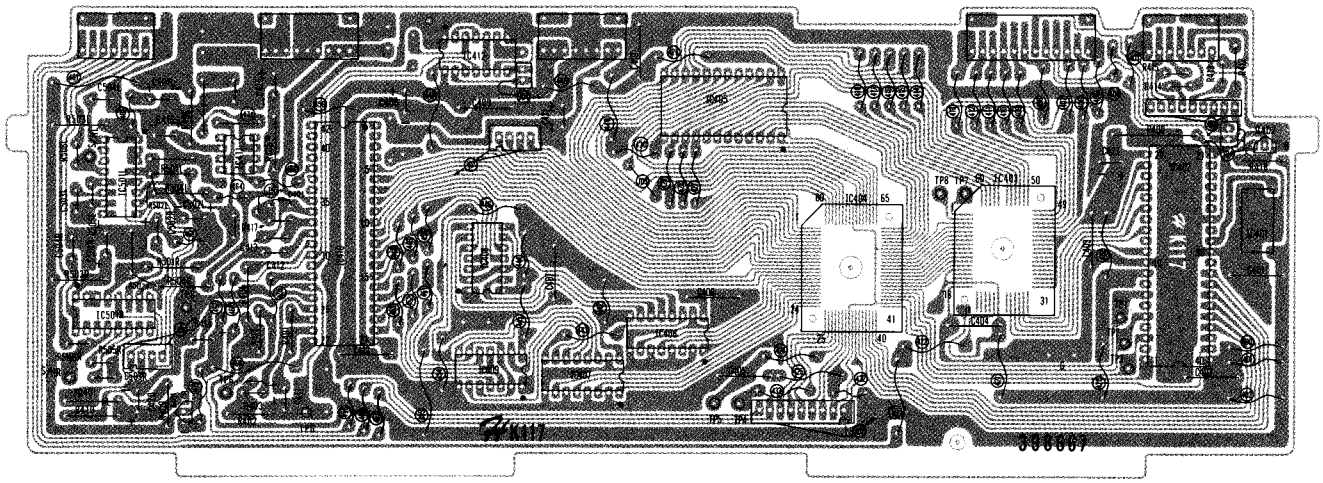


Fig. 3

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q401	2SC1213(C)		Silicon	Hitachi
Q402	2SC535(C)		Silicon	Hitachi

I.C.s

Item No.	Part Number	Rating	Description	
				Maker
IC401	CXO-041		I.C.	Kinseki
IC402	MB15529		I.C.	Hitachi
IC403	HD61901		I.C.	Hitachi
IC404	HD61902		I.C.	Hitachi
IC405	HM6116P-4		I.C.	Hitachi
IC406	TC4008BP		I.C.	Toshiba
IC407	TC4008BP		I.C.	Toshiba
IC408	TC4071BP		I.C.	Toshiba
IC409	TC4071BP		I.C.	Toshiba
IC410	HA16633P		I.C.	Hitachi
IC411	UPC4081C		I.C.	NEC
IC412	TC4001BP		I.C.	Toshiba
IC501L	HA12053		I.C.	Hitachi
IC501R	HA12053		I.C.	Hitachi

Diode

Item No.	Part Number	Rating	Description	
				Maker
ZD401	RD8.2EN3		Zener	NEC

Capacitors

Item No.	Part Number	Rating		Description
C401	QCY41HK-103	0.01MF	50V	Ceramic
C402	QCY41HK-103	0.01MF	50V	Ceramic
C403	QCY41HK-103	0.01MF	50V	Ceramic
C404	QCY41HK-103	0.01MF	50V	Ceramic
C405	QCY41HK-103	0.01MF	50V	Ceramic
C406	QCY41HK-103	0.01MF	50V	Ceramic
C407	QCY41HK-103	0.01MF	50V	Ceramic
C408	QET50JM-107	100MF	6.3V	Electrolytic
C409	QCY41HK-103	0.01MF	50V	Ceramic
C410	QCY41HK-103	0.01MF	50V	Ceramic
C411	QET51HM-105	1MF	50V	Electrolytic
C412	QFN41HK-103	0.01MF	50V	Mylar
C413	QFN42AK-124	0.12MF	100V	Mylar
C415	QET51CM-107	100MF	16V	Electrolytic
C416	QET51CM-107	100MF	16V	Electrolytic
C420	QET51CM-227	220MF	16V	Electrolytic
C421	QET50JM-107	100MF	6.3V	Electrolytic
C422	QCY41HK-103	0.01MF	50V	Ceramic
C423	QET50JM-476	47MF	6.3V	Electrolytic
C501L	QET51CM-107	100MF	16V	Electrolytic
C501R	QET51CM-107	100MF	16V	Electrolytic
C502L	QET51CM-107	100MF	16V	Electrlytic
C502R	QET51CM-107	100MF	16V	Electrolytic
C503L	QCS21HJ-220	22pF	50V	Ceramic
C503R	QCS21HJ-220	22pF	50V	Ceramic
C504L	QFS41HJ-102	1000pF	50V	Polystyrene
C504R	QFS41HJ-102	1000pF	50V	Polystyrene

Resistors

Item No.	Part Number	Rating		Description
R400	QRD141J-102S	1k	1/4W	Carbon
R401	QRD141J-101S	100	1/4W	Carbon
R402	QRD141J-393S	39K	1/4W	Carbon
R403	QVP9A0B-103	10K		Variable
R404	QRD141J-820S	82	1/4W	Carbon
R405	QRZ0052-390	39	1/4W	Fusible
R406	QRZ0052-390	39	1/4W	Fusible
R409	QRD141J-471S	470	1/4W	Carbon
R410	QRD141J-331S	330	1/4W	Carbon
R411	QRD141J-103S	10K	1/4W	Carbon
R412	QRD141J-102S	1K	1/4W	Carbon
R413	QRD143J-102S	1K	1/4W	Carbon
R414	QRD143J-102S	1K	1/4W	Carbon
R415	QRD143J-102S	1K	1/4W	Carbon
R418	QRD141J-102S	1K	1/4W	Carbon
R501L	QRD141J-222S	2.2K	1/4W	Carbon
R501R	QRD141J-222S	2.2K	1/4W	Carbon
R502L	QRD143J-392S	3.9K	1/4W	Carbon
R502R	QRD143J-392S	3.9K	1/4W	Carbon
R503L	QRD141J-101S	100	1/4W	Carbon
R503R	QRD141J-101S	100	1/4W	Carbon
R504L	QRD141J-101S	100	1/4W	Carbon
R504R	QRD141J-101S	100	1/4W	Carbon
R505L	QRD143J-103S	10K	1/4W	Carbon
R505R	QRD143J-103S	10K	1/4W	Carbon
R506L	QRD143J-562S	5.6K	1/4W	Carbon
R506R	QRD143J-562S	5.6k	1/4W	Carbon

1-(4) PK P.C. Board Ass'y (EGH2597741)

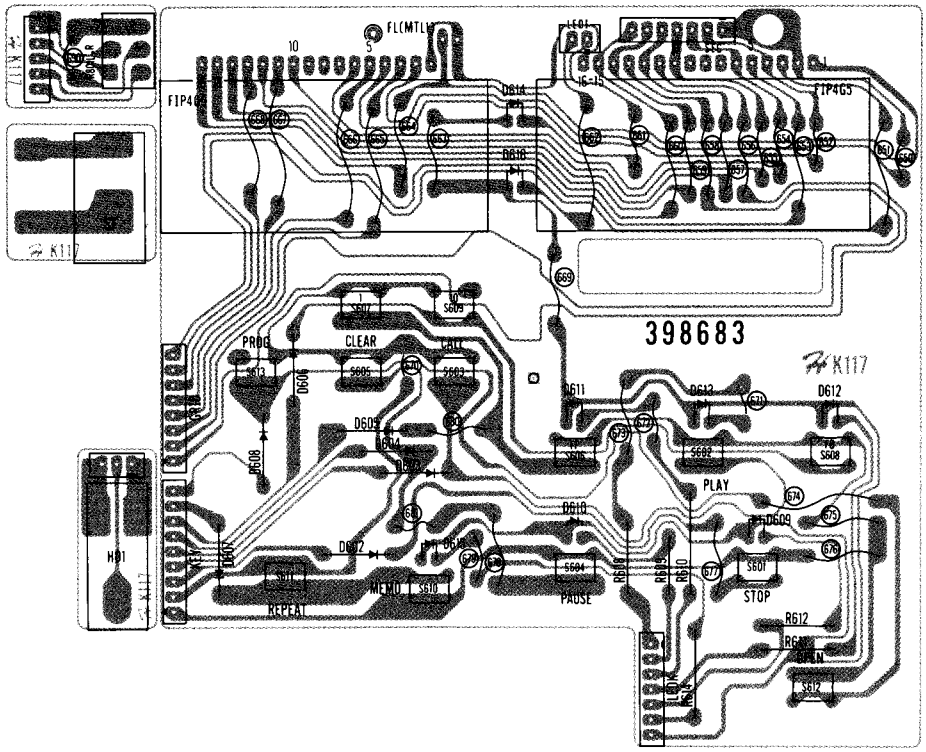


Fig. 4

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D602	1S2076		Silicon	Hitachi
D603	1S2076		Silicon	Hitachi
D604	1S2076		Silicon	Hitachi
D605	1S2076		Silicon	Hitachi
D606	1S2076		Silicon	Hitachi
D607	1S2076		Silicon	Hitachi
D608	1S2076		Silicon	Hitachi
D609	SLR-34-UR5	(RED)	L.E.D.	Rohm
D610	SLR-34-UR5	(RED)	L.E.D.	Rohm
D611	TLG-123A	(GRN)	L.E.D.	Rohm
D612	TLG-123A	(GRN)	L.E.D.	Toshiba
D613	TLG-123A	(GRN)	L.E.D.	Toshiba
D614	GL-9NG4	(RED)	L.E.D.	Sharp
D615	TLG-123A	(GRN)	L.E.D.	Toshiba
D616	GL-9NG4	(RED)	L.E.D.	Sharp

Resistors

Item No.	Part Number	Rating		Description
R608	QRD141J-151S	150	1/4W	Carbon
R609	QRD141J-561S	560	1/4W	Carbon
R610	QRD141J-151S	150	1/4W	Carbon
R611	QRD141J-151S	150	1/4W	Carbon
R612	QRD141J-561S	560	1/4W	Carbon
R614	QRD141J-151S	150	1/4W	Carbon
R801	EGH0158512	1K		Variable

Others

Item No.	Part Number	Description
FIP4G5	EGH2789121	Fluorescent tube
FIP4G5	EGH2789121	Fluorescent tube
——	EGH2339881	Location indicator
S601	ESP0001-007	Tact switch
S602	ESP0001-007	Tact switch
S603	ESP0001-007	Tact switch
S604	ESP0001-007	Tact switch
S605	ESP0001-007	Tact switch
S606	ESP0001-007	Tact switch
S607	ESP0001-007	Tact switch
S608	ESP0001-007	Tact switch
S609	ESP0001-007	Tact switch
S610	ESP0001-007	Tact switch
S611	ESP0001-007	Tact switch
S612	ESP0001-007	Tact switch
S613	ESP0001-007	Tact switch
——	EGH4744837	Spacer for F.L.Tube
——	EGH4901217	Spacer for L.E.D.
S1	EGH2639861	Power switch
HD1	EGH2677751	Headphone jack

1-(5) PP P.C. Board Ass'y (EGH2597787)

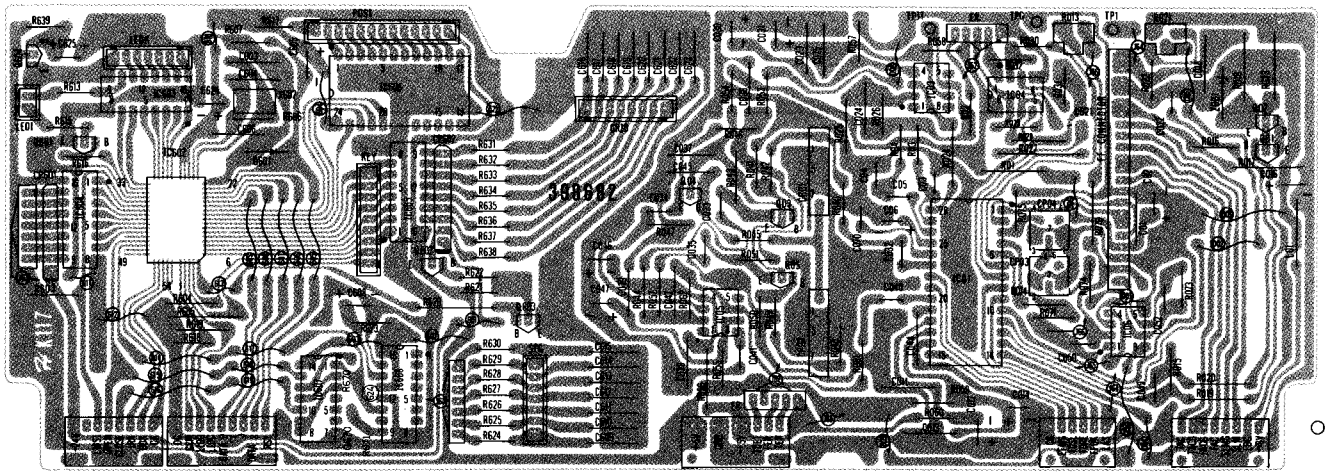


Fig. 5

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q01	2SA1015(GR)		Silicon	Toshiba
Q02	2SB562(B)		Silicon	Hitachi
Q03	2SC458(C)		Silicon	Hitachi
Q04	2SC458(C)		Silicon	Hitachi
Q05	2SC458(C)		Silicon	Hitachi
Q601	2SC458(C)		Silicon	Hitachi
Q602	2SA1015(GR)		Silicon	Toshiba
Q603	2SC458(C)		Silicon	Hitachi
Q604	2SC458(C)		Silicon	Hitachi
Q670	2SC458(C)		Silicon	Hitachi

I.C.s

Item No.	Part Number	Rating	Description	
				Maker
IC01	HA12049A		I.C.	Hitachi
IC03	LM318P		I.C.	T.I.
IC04	TL4558P-C		I.C.	T.I.
IC05	LM318P		I.C.	T.I.
IC06	TL4558P-C		I.C.	T.I.
IC602	HD44820A75		I.C.	Hitachi
IC603	LB1275		I.C.	Sanyo
IC604	TC5066BP		I.C.	Toshiba
IC605	TC5066BP		I.C.	Toshiba
IC606	HD74159P		I.C.	Hitachi
IC607	TC4001BP		I.C.	Toshiba
IC608	TC4528BP		I.C.	Toshiba

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D601	1S2076		Silicon	Hitachi
ZD01	RD6.2EN1		Zener	NEC

Capacitors

Item No.	Part Number	Rating		Description
C01	QCY41HK-103	0.01MF	50V	Ceramic
C02	QET50JM-476	47MF	6.3V	Electrolytic
C03	QFN41HK-333	0.033MF	50V	Mylar
C04	QCS21HJ-151	150pF	50V	Ceramic
C05	QFN41HK-473	0.047MF	50V	Mylar
C06	QET50JM-476	47MF	6.3V	Electrolytic
C07	QFN41HK-473	0.047MF	50V	Mylar
C011	QCY41HK-103	0.01MF	50V	Ceramic
C012	QET50JM-227	220MF	6.3V	Electrolytic
C013	QCY41HK-103	0.01MF	50V	Ceramic
C014	QET50JM-227	220MF	6.3V	Electrolytic
C016	QET51CM-106	10MF	16V	Electrolytic
C018	QCY41HK-103	0.01MF	50V	Ceramic
C021	QET51HM-105	1MF	50V	Electrolytic
C022	QCF21HP-473	0.047MF	50V	Ceramic
C023	QCY41HK-103	0.01MF	50V	Ceramic
C024	QCS21HJ-390	39pF	50V	Ceramic
C025	QCY41HK-103	0.01MF	50V	Ceramic
C030	QET50JM-227	220MF	6.3V	Electrolytic
C031	QET50JM-227	220MF	6.3V	Electrolyric
C032	QFN41HK-224	0.22MF	50V	Mylar
C033	QFN41HK-223	0.022MF	50V	Mylar
C034	QFN41HK-223	0.022MF	50V	Mylar
C035	QFN41HK-223	0.022MF	50V	Mylar
C036	QCY41HK-103	0.01MF	50V	Ceramic
C037	QCY41HK-103	0.01MF	50V	Ceramic
C038	QCY41HK-103	0.01MF	50V	Ceramic
C039	QCY41HK-103	0.01MF	50V	Ceramic
C040	QFN41HK-473	0.047MF	50V	Mylar
C041	QCS21HJ-5R0	5pF	50V	Ceramic
C042	QCS21HJ-4R7	4.7pF	50V	Ceramic
C043	QCF21HP-103	0.01MF	50V	Ceramic
C044	QCY41HK-103	0.01MF	50V	Ceramic
C045	QCS21HJ-100	10pF	50V	Ceramic
C046	QET50JM-227	220MF	6.3V	Electrolytic
C047	QET50JM-227	220MF	6.3V	Electrolytic
C050	QCS21HJ-330	33pF	50V	Ceramic
C052	QCS21HJ-330	33pF	50V	Ceramic
C503	QCS21HJ-560	56pF	50V	Ceramic
C603	QCY41HK-222	2200pF	50V	Ceramic
C604	QCS21HJ-471	470pF	50V	Ceramic
C605	QET51HM-105	1MF	50V	Electrolytic
C606	QCY41HK-103	0.01MF	50V	Ceramic
C608	QET51AM-226	22MF	10V	Electrolytic
C609	QCS21HJ-331	330pF	50V	Ceramic

Capacitors

Item No.	Part Number	Rating		Description
C610	QCS21HJ-331	330pF	50V	Ceramic
C611	QCS21HJ-331	330pF	50V	Ceramic
C612	QCS21HJ-331	330pF	50V	Ceramic
C613	QCS21HJ-331	330pF	50V	Ceramic
C614	QCS21HJ-331	330pF	50V	Ceramic
C615	QCS21HJ-331	330pF	50V	Ceramic
C616	QCS21HJ-331	330pF	50V	Ceramic
C617	QCS21HJ-331	330pF	50V	Ceramic
C618	QCS21HJ-331	330pF	50V	Ceramic
C619	QCS21HJ-331	330pF	50V	Ceramic
C620	QCS21HJ-331	330pF	50V	Ceramic
C621	QCS21HJ-331	330pF	50V	Ceramic
C622	QCS21HJ-331	330pF	50V	Ceramic
C623	QCS21HJ-331	330pF	50V	Ceramic
C624	QET50JM-476	47MF	6.3V	Electrolytic
C625	QET51CM-106	10MF	16V	Electrolytic
C670	QET51AM-226	22MF	10V	Electrolytic

Resistors

Item No.	Part Number	Rating		Description
R01	QRD141J-102S	1K	1/4W	Carbon
R02	QRD141J-102S	1K	1/4W	Carbon
R03	QRD141J-473S	47K	1/4W	Carbon
R04	QRD141J-224S	220K	1/4W	Carbon
R013	QVP9A0B-104	100K		Variable
R014	QRD141J-332S	3.3K	1/4W	Carbon
R015	QRD141J-224S	220K	1/4W	Carbon
R016	QRD141J-153S	15K	1/4W	Carbon
R017	QRD141J-103S	10K	1/4W	Carbon
R018	QRC121K-220EM	22	1/2W	Composition
R019	QRD141J-101S	100	1/4W	Carbon
R020	QRD141J-153S	15K	1/4W	Carbon
R021	QVP9AOB-502	5K		Variable
R022	QRD141J-681S	680	1/4W	Carbon
R024	QRD141J-332S	3.3K	1/4W	Carbon
R025	QRD141J-332S	3.3K	1/4W	Carbon
R026	QRD141J-122S	1.2K	1/4W	Carbon
R027	QRD141J-332S	3.3K	1/4W	Carbon
R028	QRD141J-332S	3.3K	1/4W	Carbon
R029	QRD141J-682S	6.8K	1/4W	Carbon
R030	QRD141J-102S	1K	1/4W	Carbon
R031	QRD141J-102S	1K	1/4W	Carbon
R032	QRD141J-103S	10K	1/4W	Carbon
R033	QRZ0050-100	10	1/2W	Fusible
R040	QRD141J-102S	1K	1/4W	Carbon
R041	QRD141J-103S	10K	1/4W	Carbon
R042	QRD141J-123S	12K	1/4W	Carbon
R043	QRD141J-472S	4.7K	1/4W	Carbon
R044	QRD141J-103S	10K	1/4W	Carbon
R045	QRD141J-103S	10K	1/4W	Carbon
R046	QRD141J-472S	4.7K	1/4W	Carbon
R047	QRD141J-103S	10K	1/4W	Carbon
R048	QRD141J-102S	1K	1/4W	Carbon
R049	QRD141J-123S	12K	1/4W	Carbob
R050	QRD141J-103S	10K	1/4W	Carbon
R051	QRD141J-472S	4.7K	1/4W	Carbon
R052	QRD141J-103S	10K	1/4W	Carbon
R053	QRD141J-101S	100	1/4W	Carbon
R054	QRD141J-101S	100	1/4W	Carbon
R055	QRD141J-100S	10	1/4W	Carbon
R056	QRD141J-100S	10	1/4W	Carbon
R057	QRD141J-100S	10	1/4W	Carbon
R058	QRD141J-100S	10	1/4W	Carbon
R059	QRD141J-100S	10	1/4W	Carbon
R060	QRD141J-100S	10	1/4W	Carbon

Resistors

Item No.	Part Number	Rating		Description
R061	QRD141J-472S	4.7K	1/4W	Carbon
R062	QRD141J-103S	10K	1/4W	Carbon
R070	QRD141J-184S	180K	1/4W	Carbon
R071	QRD141J-332S	3.3K	1/4W	Carbon
R073	QRD141J-224S	220K	1/4W	Carbon
R074	QRD141J-332S	3.3K	1/4W	Carbon
R075	QRD141J-332S	3.3K	1/4W	Carbon
R603	QRD141J-472S	4.7K	1/4W	Carbon
R604	QRD141J-124S	120K	1/4W	Carbon
R605	QRD141J-124S	120K	1/4W	Carbon
R606	QRD141J-105S	1M	1/4W	Carbon
R607	QRD141J-103S	10K	1/4W	Carbon
R613	QRD141J-151S	150	1/4W	Carbon
R615	QRD141J-221S	220	1/4W	Carbon
R616	QRD141J-103S	10K	1/4W	Carbon
R617	QRD141J-561S	560	1/4W	Carbon
R618	QRD141J-222S	2.2K	1/4W	Carbon
R619	QRD141J-222S	2.2K	1/4W	Carbon
R620	QRD141J-103S	10K	1/4W	Carbon
R621	QRD141J-562S	5.6K	1/4W	Carbon
R622	QRD141J-223S	22K	1/4W	Carbon
R623	QRD141J-124S	120K	1/4W	Carbon
R624	QRD141J-103S	10K	1/4W	Carbon
R625	QRD141J-103S	10K	1/4W	Carbon
R626	QRD141J-103S	10K	1/4W	Carbon
R627	QRD141J-103S	10K	1/4W	Carbon
R628	QRD141J-103S	10K	1/4W	Carbon
R629	QRD141J-103S	10K	1/4W	Carbon
R630	QRD141J-103S	10K	1/4W	Carbon
R631	QRD141J-103S	10K	1/4W	Carbon
R632	QRD141J-103S	10K	1/4W	Carbon
R633	QRD141J-103S	10K	1/4W	Carbon
R634	QRD141J-103S	10K	1/4W	Carbon
R635	QRD141J-103S	10K	1/4W	Carbon
R636	QRD141J-103S	10K	1/4W	Carbon
R637	QRD141J-103S	10K	1/4W	Carbon
R638	QRD141J-103S	10K	1/4W	Carbon
R639	QRD141J-332S	3.3K	1/4W	Carbon
R670	QRD141J-103S	10K	1/4W	Carbon
R671	QRD141J-562S	5.6K	1/4W	Carbon
R672	QRD141J-474S	470K	1/4W	Carbon

Others

Item No.	Part Number	Description
CP01	EGH2136421	Low-pass filter
CP02	EGH2136421	Low-pass filter
CP601	EGH0189014	Resistor array(100K x 7)
CP602	EGH0149571	Resistor array(100K x 8)
X602	EGH2154421	Ceramic Oscillator
L01	EGH2227352	Choke coil(22μH)

1-(6) PS P.C. Board Ass'y (EGH2597722) : for U.S.A. & Canada
(EGH2597723) : for Other Countries

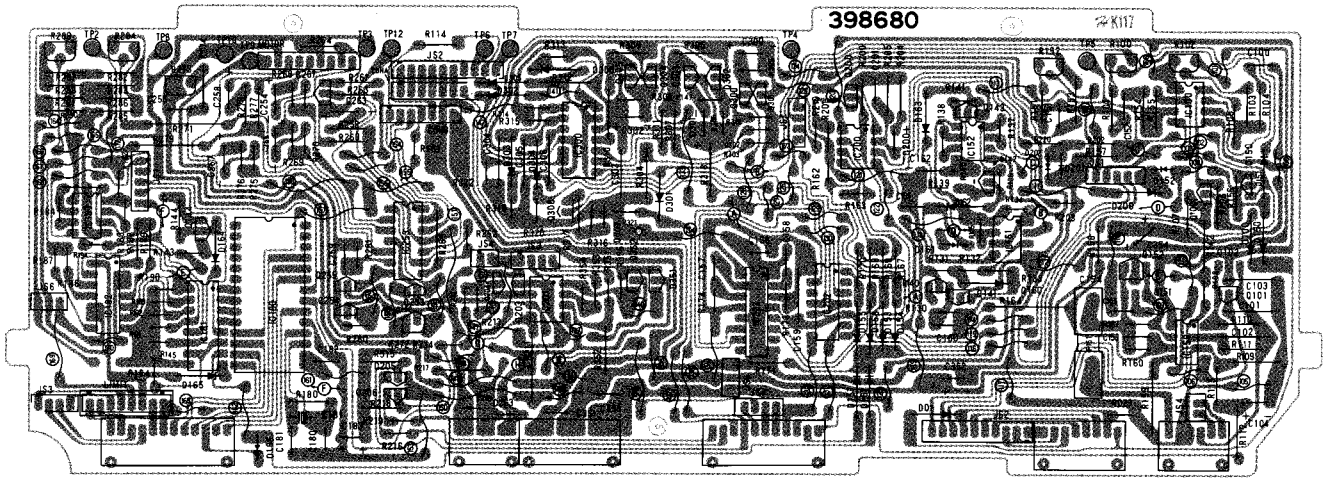


Fig. 6

Transistors

Item No.	Part Number	Rating	Description	Maker
Q100	2SK246(Y)		F.E.T.	Toshiba
Q101	2SB562(B)		Silicon	Hitachi
Q102	2SD468(C)		Silicon	Hitachi
Q140	2SC458(C)		Silicon	Hitachi
Q141	2SA1015(GR)		Silicon	Toshiba
Q142	2SK246(Y)		F.E.T.	Toshiba
Q143	2SK246(Y)		F.E.T.	Toshiba
Q144	2SK246(BL)		F.E.T.	Toshiba
Q150	2SK246(Y)		F.E.T.	Toshiba
Q151	2SB562(B)		Silicon	Hitachi
Q152	2SD468(C)		Silicon	Hitachi
Q200	2SK246(Y)		F.E.T.	Toshiba
Q203	2SD468(C)		Silicon	Hitachi
Q204	2SB562(B)		Silicon	Hitachi
Q205	2SC458(C)		Silicon	Hitachi
Q206	2SC458(C)		Silicon	Hitachi
Q250	2SC458(C)		Silicon	Hitachi
Q252	2SD468(C)		Silicon	Hitachi
Q253	2SB562(B)		Silicon	Hitachi
Q254	2SD468(C)		Silicon	Hitachi
Q255	2SB562(B)		Silicon	Hitachi
Q300	2SC458(C)		Silicon	Hitachi
Q301	2SA1015(GR)		Silicon	Toshiba
Q302	2SA1015(GR)		Silicon	Toshiba
Q303	2SC458(C)		Silicon	Hitachi
Q304	2SA1015(GR)		Silicon	Toshiba
Q305	2SC458(C)		Silicon	Hitachi
Q306	2SC458(C)		Silicon	Hitachi
Q351	2SB562(B)		Silicon	Hitachi
Q352	2SD468(C)		Silicon	Hitachi

I.C.s

Item No.	Part Number	Rating	Description	Maker
IC100	TL4558P-C		I.C.	T.I.
IC150	TL4558P-C		I.C.	T.I.
IC151	LA6393D		I.C.	Sanyo
IC152	TL4558P-C		I.C.	T.I.
IC180	HD44700A17		I.C.	Hitachi
IC181	M54560P		I.C.	Mitsubishi
IC182	TC4066BP		I.C.	Toshiba
IC183	TL4558P-C		I.C.	T.I.
IC200	TL4558P-C		I.C.	T.I.
IC201	TL4558P-C		I.C.	T.I.
IC202	TC4013BP		I.C.	Toshiba
IC203	TC4528BP		I.C.	Toshiba
IC251	IR3702		I.C.	Sharp
IC300	HA17901P		I.C.	Hitachi

Diodes

Item No.	Part Number	Rating	Description	Maker
D01	1S2076		Silicon	Hitachi
D100	1S2076		Silicon	Hitachi
D150	1S2076		Silicon	Hitachi
D151	1S2076		Silicon	Hitachi
D152	1S2076		Silicon	Hitachi
D153	1S2076		Silicon	Hitachi
D154	1S2076		Silicon	Hitachi
D155	1S2076		Silicon	Hitachi
D156	1S2076		Silicon	Hitachi
D157	1S2076		Silicon	Hitachi
D161	1S2076		Silicon	Hitachi
D162	1S2076		Silicon	Hitachi
D163	1S2076		Silicon	Hitachi
D164	1S2076		Silicon	Hitachi
D165	1S2076		Silicon	Hitachi
D166	1S2076		Silicon	Hitachi
D167	1S2076		Silicon	Hitachi
D200	1S2076		Silicon	Hitachi
D201	1S2076		Silicon	Hitachi
D202	1S2076		Silicon	Hitachi
D300	1S2076		Silicon	Hitachi
D301	1S2076		Silicon	Hitachi
D302	1S2076		Silicon	Hitachi
D303	1S2076		Silicon	Hitachi
D304	1S2076		Silicon	Hitachi
D305	1S2076		Silicon	Hitachi

Capacitors

Item No.	Part Number	Rating		Description
C100	QFN41HK-333	0.033MF	50V	Mylar
C101	QCY41HK-103	0.01MF	50V	Ceramic
C102	QCY41HK-221	220pF	50V	Ceramic
C103	QCY41HK-103	0.01MF	50V	Ceramic
C151	QCS21HJ-471	470pF	50V	Ceramic
C152	QFN41HK-153	0.015MF	50V	Mylar
C153	QCS21HJ-221	220pF	50V	Ceramic
C154	QCF21HP-103	0.01MF	50V	Ceramic
C155	QCF21HP-103	0.01MF	50V	Ceramic
C156	QCF21HP-103	0.01Mf	50V	Ceramic
C157	QFN41HK-103	0.01MF	50V	Mylar
C158	QFN41HK-103	0.01MF	50V	Mylar
C159	QCY41HK-103	0.01MF	50V	Ceramic
C160	QFN41HK-104	0.1MF	50V	Mylar
C161	QCS21HJ-471	470pF	50V	Ceramic
C162	QET51HM-105	1MF	50V	Electrolytic
C180	QCY41HK-471	470pF	50V	Ceramic
C181	QCY41HK-222	2200pF	50V	Ceramic
C182	QCF21HP-103	0.01MF	50V	Ceramic
C183	QET50JM-476	47MF	6.3V	Electrolytic

Capacitors

Item No.	Part Number	Rating		Description
C200	QET51HM-475	4.7MF	50V	Electrolytic
C201	QFN41HK-103	0.01MF	50V	Mylar
C253	QET51CM-106	10MF	16V	Electrolytic
C254	QET50JM-476	47MF	6.3V	Electrolytic
C255	QET50JM-476	47MF	6.3V	Electrolytic
C256	QFN41HK-102	1000pF	50V	Mylar
C257	QET50JM-476	47MF	6.3V	Electrolytic
C258	QET50JM-476	47MF	6.3V	Electrolytic
C259	QFN41HK-102	1000pF	50V	Mylar
C261	QCF21HP-473	0.047MF	50V	Ceramic
C263	QCF21HP-473	0.047MF	50V	Ceramic
C300	QET51CM-106	10MF	16V	Electrolytic
C301	QET50JM-476	47MF	6.3V	Electrolytic
C302	QFN41HK-223	0.022MF	50V	Mylar
C303	QCY41HK-103	0.01MF	50V	Ceramic
C304	QCS21HJ-330	33pF	50V	Ceramic
C305	QCS21HJ-330	33pF	50V	Ceramic
C306	QCY41HK-103	0.01MF	50V	Ceramic
C307	QCF21HP-473	0.047MF	50V	Ceramic
C352	QET50JM-477	470MF	6.3V	Electrolytic
C353	QCF21HP-103	0.01MF	50V	Ceramic
C354	QET50JM-477	470MF	6.3V	Electrolytic

Resistors

Item No.	Part Number	Rating		Description
R023	QRD143J-474S	470K	1/4W	Carbon
R100	QVP9A0B-103	10K		Variable
R101	QRD141J-102S	1K	1/4W	Carbon
R102	QVP9A0B-103	10K		Variable
R103	QRD141J-104S	100K	1/4W	Carbon
R104	QRD141J-122S	1.2K	1/4W	Carbon
R105	QRD141J-123S	12K	1/4W	Carbon
R106	QRD141J-104S	100K	1/4W	Carbon
R107	QRD141J-103S	10K	1/4W	Carbon
R108	QRD143J-822S	8.2K	1/4W	Carbon
R109	QRD141J-103S	10K	1/4W	Carbon
R110	QRD141J-223S	22K	1/4W	Carbon
R111	QRD141J-333S	33K	1/4W	Carbon
R112	QRD141J-473S	47K	1/4W	Carbon
R113	QRD141J-223S	22K	1/4W	Carbon
R114	QRD141J-334S	330K	1/4W	Carbon
R130	QRD143J-393S	39K	1/4W	Carbon
R131	QRD143J-123S	12K	1/4W	Carbon
R132	QRD143J-223S	22K	1/4W	Carbon
R133	QRD143J-393S	39K	1/4W	Carbon
R134	QRD143J-104S	100K	1/4W	Carbon
R135	QRD143J-104S	100K	1/4W	Carbon
R136	QRD143J-104S	100K	1/4W	Carbon
R137	QRD143J-223S	22K	1/4W	Carbon
R138	QRD143J-223S	22K	1/4W	Carbon
R139	QRD141J-123S	12K	1/4W	Carbon
R140	QRD143J-102S	1K	1/4W	Carbon
R141	QRD143J-104S	100K	1/4W	Carbon
R142	QRD141J-332S	3.3K	1/4W	Carbon
R143	QRD143J-222S	2.2K	1/4W	Carbon
R144	QRD141J-104S	100K	1/4W	Carbon
R145	QRD143J-103S	10K	1/4W	Carbon
R146	QRD143J-104S	100K	1/4W	Carbon
R147	QRD143J-224S	220K	1/4W	Carbon
R151	QRD141J-102S	1K	1/4W	Carbon
R152	QVP9A0B-103	10K		Variable
R153	QRD141J-103S	10K	1/4W	Carbon
R154	QRD141J-122S	1.2K	1/4W	Carbon
R155	QRD141J-123S	12K	1/4W	Carbon
R156	QRD141J-104S	100K	1/4W	Carbon
R157	QRD141J-103S	10K	1/4W	Carbon
R158	QRD141J-103S	10K	1/4W	Carbon
R159	QRD141J-103S	10K	1/4W	Carbon
R160	QRD143J-333S	33K	1/4W	Carbon
R161	QRD143J-223S	22K	1/4W	Carbon
R162	QRD143J-103S	10K	1/4W	Carbon
R163	QRD143J-103S	10K	1/4W	Carbon
R164	QRD141J-333S	33K	1/4W	Carbon
R167	QRD141J-243S	24K	1/4W	Carbon
R168	QRD141J-243S	24K	1/4W	Carbon
R169	QRD141J-473S	47K	1/4W	Carbon
R170	QRD141J-473S	47K	1/4W	Carbon
R171	QRD141J-223S	22K	1/4W	Carbon
R173	QRD143J-273S	27K	1/4W	Carbon
R174	QRD143J-273S	27K	1/4W	Carbon
R180	QRD143J-105S	1M	1/4W	Carbon
R181	QRD143J-474S	470K	1/4W	Carbon
R182	QRD143J-153S	15K	1/4W	Carbon
R183	QRD143J-103S	10K	1/4W	Carbon
R184	QRD143J-103S	10K	1/4W	Carbon
R185	QRD141J-123S	12K	1/4W	Carbon
R186	QRD143J-272S	2.7K	1/4W	Carbon
R187	QRD143J-103S	10K	1/4W	Carbon
R188	QRD141J-393S	39K	1/4W	Carbon
R189	QRD141J-203S	20K	1/4W	Carbon

Resistors

Item No.	Part Number	Rating		Description
R190	QRD143J-333S	33K	1/4W	Carbon
R191	QRD143J-333S	33K	1/4W	Carbon
R192	QRD143J-333S	33K	1/4W	Carbon
R193	QRD143J-333S	33K	1/4W	Carbon
R194	QRD143J-472S	4.7K	1/4W	Carbon
R200	QRD141J-104S	100K	1/4W	Carbon
R201	QRD143J-103S	10K	1/4W	Carbon
R203	QRD143J-273S	27K	1/4W	Carbon
R204	QRD141J-513S	51K	1/4W	Carbon
R205	QRD141J-474S	470K	1/4W	Carbon
R210	QRD143J-473S	47K	1/4W	Carbon
R211	QRD141J-333S	33K	1/4W	Carbon
R212	QRD143J-104S	100K	1/4W	Carbon
R213	QRD143J-223S	22K	1/4W	Carbon
R214	QRD143J-154S	150K	1/4W	Carbon
R215	QRD141J-682S	6.8K	1/4W	Carbon
R216	QRD143J-104S	100K	1/4W	Carbon
R217	QRD141J-124S	120K	1/4W	Carbon
R218	QRD141J-682S	6.8K	1/4W	Carbon
R219	QRD143J-104S	100K	1/4W	Carbon
R220	QRD141J-822S	8.2K	1/4W	Carbon
R252	QRD143J-104S	100K	1/4W	Carbon
R259	QRD141J-333S	33K	1/4W	Carbon
R260	QRD141J-104S	100K	1/4W	Carbon
R261	QRD141J-102S	1K	1/4W	Carbon
R263	QRD141J-330S	33	1/4W	Carbon
R264	QRD141J-102S	1K	1/4W	Carbon
R265	QRD141J-104S	100K	1/4W	Carbon
R267	QRD143J-392S	3.9K	1/4W	Carbon
R268	QRD143J-393S	39K	1/4W	Carbon
R269	QRD143J-393S	39K	1/4W	Carbon
R270	QRD143J-392S	3.9K	1/4W	Carbon
R271	QRD141J-823S	82K	1/4W	Carbon
R272	QRD143J-223S	22K	1/4W	Carbon
R273	QVP9A0B-104	100K		Variable
R274	QRD141J-393S	39K	1/4W	Carbon
R275	QRD143J-392S	3.9K	1/4W	Carbon
R276	QRD143J-393S	39K	1/4W	Carbon
R277	QRD141J-393S	39K	1/4W	Carbon
R278	QRD141J-392S	3.9K	1/4W	Carbon
R279	QRD141J-823S	82K	1/4W	Carbon
R280	QRD143J-223S	22K	1/4W	Carbon
R281	QRD143J-823S	82K	1/4W	Carbon
R282	QRD141J-153S	15K	1/4W	Carbon
R283	QRD141J-102S	1K	1/4W	Carbon
R284	QVP9A0B-102	1K		Variable
R285	QRD141J-153S	15K	1/4W	Carbon
R286	QRD141J-102S	1K	1/4W	Carbon
R287	QRD141J-153S	15K	1/4W	Carbon
R288	QRD141J-102S	1K	1/4W	Carbon
R289	QVP9A0B-102	1K		Variable
R290	QRD141J-153S	15K	1/4W	Carbon
R291	QRD141J-102S	1K	1/4W	carbon
R300	QRD143J-333S	33K	1/4W	Carbon
R301	QRD143J-123S	12K	1/4W	Carbon
R302	QRD143J-103S	10K	1/4W	Carbon
R303	QRD143J-333S	33K	1/4W	Carbon
R304	QRD141J-683S	68K	1/4W	Carbon
R305	QRD143J-104S	100K	1/4W	Carbon
R306	QRD141J-123S	12K	1/4W	Carbon
R307	QRD141J-562S	5.6K	1/4W	Carbon
R308	QRD143J-104S	100K	1/4W	Carbon
R309	QRD141J-123S	12K	1/4W	Carbon
R310	QRD141J-103S	10K	1/4W	Carbon
R311	QRD141J-103S	10K	1/4W	Carbon
R312	QRD141J-103S	10K	1/4W	Carbon
R313	QRD143J-103S	10K	1/4W	Carbon
R314	QRD143J-103S	10K	1/4W	Carbon
R315	QRD143J-103S	10K	1/4W	Carbon
R316	QRD143J-474S	470K	1/4W	Carbon
R318	QRD141J-103S	10K	1/4W	Carbon
R319	QRD143J-474S	470K	1/4W	Carbon
R320	QRD143J-474S	470K	1/4W	Carbon
R321	QRD143J-474S	470K	1/4W	Carbon
R322	QRD143J-104S	100K	1/4W	Carbon
R351	QRD143J-473S	47K	1/4W	Carbon
R352	QRD141J-563S	56K	1/4W	Carbon
R353	QRD143J-473S	47K	1/4W	Carbon
R354	QRD143J-563S	56K	1/4W	Carbon
R355	QRD143J-473S	47K	1/4W	Carbon

Others

Item No.	Part Number	Description
F151	QMF51U1-R63	Fuse (for U.S.A. & Canada)
F151	QMF51A2-R50L	Fuse (except U.S.A. &Canada)
X181	EGH2154421	Ceramic Oscillator (400kHz)

2. Unit Mechanism Ass'y and Parts List

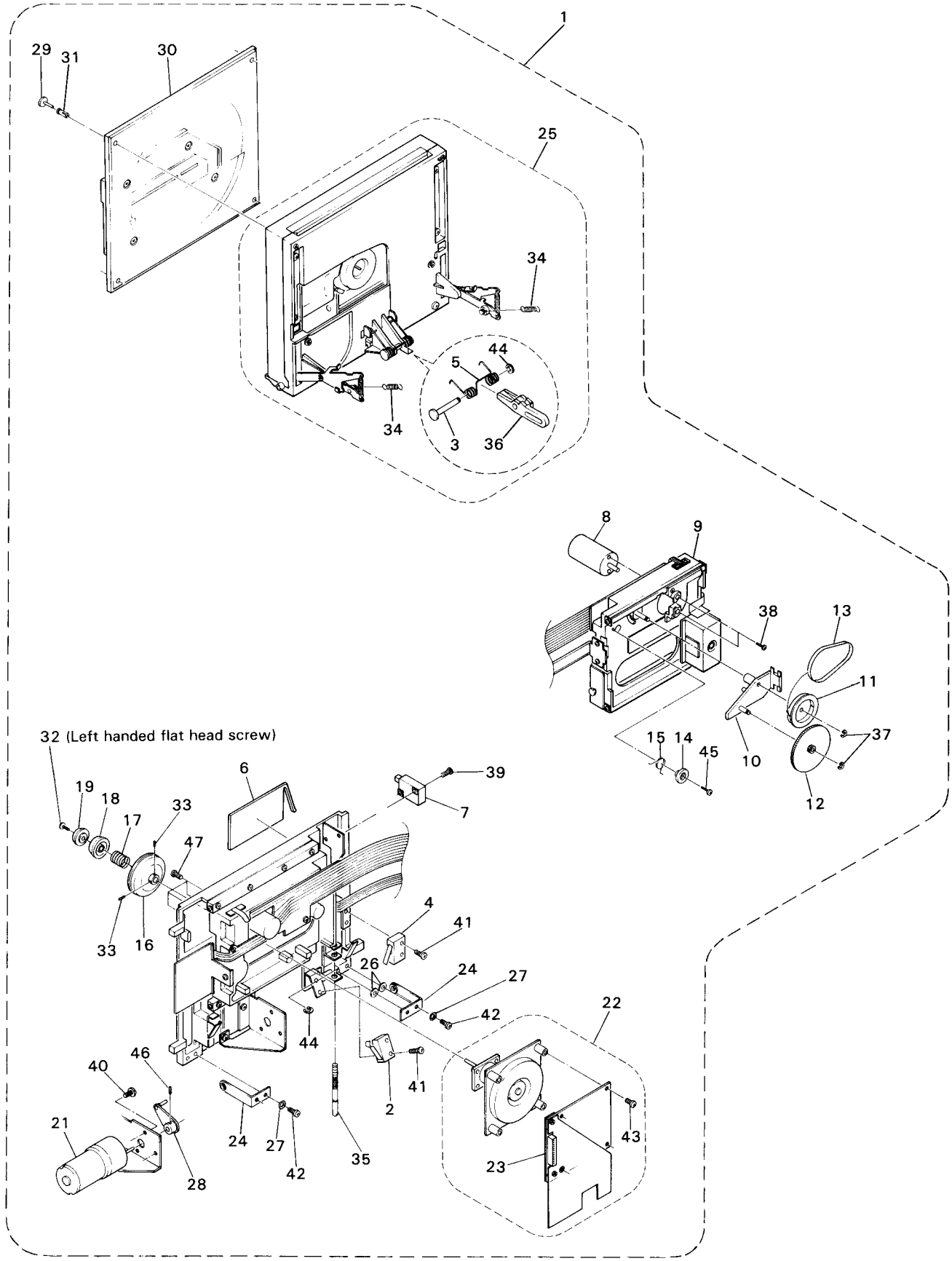


Fig. 7

Unit mechanism ass'y

Item No.	Part Number	Description
1	EGH4022601	Unit mechanism ass'y
2	EGH2628171	Micro switch (for pickup inner limit)
3	EGH4586551	Lever pin
4	EGH2638901	Micro switch (for door closed)
5	EGH3364412	Spring
6	EGH3953912	Lid
7	EGH2787622	Micro switch (for door open)
8 (*)	EGH2523552	Motor (for pickup, 4 Terminals)
8 (*)	EGH2523551	Motor (for pickup, 2 Terminals, by Canon)
9	EGH4021251	Pickup mechanism ass'y
10	EGH3953891	Gear base
11	EGH3953862	Reduction gear
12	EGH3953871	Sending gear
13	EGH4690072	Belt
14	EGH4585781	Sleeve
15	EGH3364711	Twist coil spring
16	EGH4585082	Turntable ass'y
17	EGH3362571	Coil spring
18	EGH4585341	Taper ring
19	EGH4585331	TR stopper
20		
21	EGH2523592	Gear motor ass'y
22	EGH4021971	Turntable motor ass'y
23	EGH2788583	Coil ass'y
24	EGH4446272	"L" arm
25	EGH4022523	Door (Loading mechanism) ass'y
26	WSS3000	Washer
27	WBS3000	Tooth lock washer
28	EGH4021481	Crank arm
29	EGH4448722	Ornamental nut
30	EGH4450162	Door panel Ass'y
31	EGH3947541	Nylon rivet
32	EGH4584831	Left handed flat head screw
33	EGH4584821	Hexagon socket screw
34	EGH3364782	Spring
35 (*)	EGH4586661	Transit screw (+)
35 (*)	EGH4584782	Transit screw (-)
36	EGH3961191	Driving arm lever
37	REE1500	"E" ring
38	SPSP2008Z	Screw (for pickup motor)
39	SDSB2610Z	DT bind screw
40	SPSP3004Z	Pan head screw
41	SDSB2010Z	DT bind screw
42	SDSB3008Z	DT bind screw
43	SDSP3008Z	DT bind screw
44	REE3000	"E" ring
45	SDSB2606Z	DT bind tapping screw
46	EGH4561993	Hexagon socket screw
47	SPSP3006M	Screw

Note: Items with no part number and no description are not stocked.
(*) : 2 sorts exist.

3. Description of Pins in Alphabetical Order

	Pin Name	Description
	A	
	ACS	During access
	AGND	Analog system GND
	B	
	BOK	Clock pulse for information exchange with other microprocessors
	C	
	CDP	P flag (Signal to identify the non-recorded section between tunes)
	CDQ 0-3	Q data (Date for disc time)
	CKAB	Clock pulse for information exchange with other microprocessors
	CKEXT	Data transfer clock pulse
	CLOSE	Door close
	CLVH	CLV operation HOLD instruction At "H", CLV servo does not work.
	CONB 8-10	Disc motor control
	D	
	DATA 0-3	Data bus for information exchange with other microprocessors
	DBP	
	DBPS	Photosensor common
	DGND	Digital system GND
	DMCA	Disc motor coil A
	DMCB	Disc motor coil B
	DMSW	Disc motor ON/OFF switch
	DM +5 V	8-10 V, unregulated, from motor power supply
	DM −5 V	−8- −10 V, unregulated, from motor power supply
	DSLC	Data slice level control
	E	
	EFMS	EFM output
	EMP	Emphasis flag
	F	
	FAC	Focus actuator coil
	FASG	Focus coil return (GND)
	FB	Backward switch

	Pin Name	Description
	FC 1-4	Outputs of four division photo diodes
	FDSL	Data slice level
	FER	Focus error
	FF	Forward switch
	FFOK	Focus loop OK
	FL 1-2	Power supplies (AC) for FL display
	FOK	Focus OK
	FPRE	Data slice reference level
	FUD	Lens UP/DOWN
	G	
	GCM	Tracking gain control complete
	GND	Ground
	GRI 1-8	FL digit select (scan) signal
	H	
	HG	Hall element bias GND
	HI	Hall element bias control
	HVA 1-2	Hall element outputs A
	HVB 1-2	Hall element outputs B
	I	
	IRA	Clock pulse for information exchange with other microprocessors
	IRQ	Control data read request
	J	
	JPF	Jump forward
	JPR	Jump reverse
	K	
	KEY 3-9	To key port microprocessor (operation key input)
	KMOD	To key (mode) microprocessor (key scan)
	KPRO	To key (program) microprocessor (scan)
	L	
	L	L-ch audio signal
	LASW	Laser ON control

	Pin Name	Description
	LBG	Laser common
	LDK	Laser drive
	LFIX	L-ch fixed output
	LG/LGND	L-ch GND
	LIDC	Door close complete SW
	LIDM	Door motor drive
	LIDMG	Door motor GND
	LIDO	Door open complete SW
	LMSI	Limit SW, inner (pickup reset)
	LVAR	L-ch variable output
	M	
	MDA	Monitor diode output
	MEMO	Memory stop SW
	MU2	Muting
	MU1	C1 in error flag state
	MUT	C1 in error flag state
	N	
	NC	Not connected
	O	
	OPEN	Door open
	P	
	PAUSE	Pause
	PD	Phase control (disc motor)
	PLAY	Play
	POS 0-11	Location (time) indicator drive
	POS A-D	Location (time) indicator data
	PREF	Reference, 33 kHz
	PROG	Program key
	PWM	Pulse width modulation control (disc motor)
	Q	
	R	
	R	R-ch audio signal
	RESET	Microprocessor reset

	Pin Name	Description
	RFIX	R-ch fixed output
	RG/RGND	R-ch GND
	ROT	Signal to fix PD when motor starts
	RVAR	R-ch variable output
	S	
	SEG 1-7	FL segment drive signals
	SLF	Slide motor forwarding
	SLM	Slide motor drive
	SLMG	Slide motor GND
	SLR	Slide motor reversing
	START	D/A calibration start
	STOP	Stop
	T	
	TAC	Tracking actuator coil
	TACG	Tracking actuator coil return (GND)
	TDET	EFM signal (to the dropout detector circuit)
	TER	Tracking error
	TRA	Sensor output for tracking
	TRC	Sensor output for tracking
	TSW	Tracking loop SW

4. Adjustment procedures (Electrical Section)

The following items to be preset before adjustment.
The following adjustment should be made on the inside (; in the first tune) of the disc.

Preset

Adjustment	Symbol Number	Preset Position
Laser diode output	R021	———
Tracking servo offset	R013	Medium
Focus servo gain	R100	Medium
Focus servo offset	R102	Medium
Tracking servo gain	R152	Medium
Disc motor hall gain balance	R273	Medium
Disc motor hall (A) offset	R289	Medium
Disc motor hall (B) offset	R284	Medium
DAC initial adjustment	R403	Medium

4-(1) Laser diode output adjustment

(1) Adjusting instrument
Oscilloscope
(2) Adjustment method
1) Connect the oscilloscope between TP-11 (TDET) and TP-G (GND).
2) Insert a disc into the player and put it in play mode.
3) When the EFM signal level is 500 mV to 850 mV, it is not necessary to adjust it.
If the EFM signal is over limits, adjust R021 until the level of the EFM signal on the oscilloscope is about 600 mV.

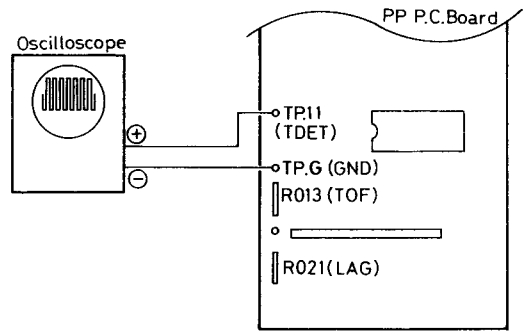
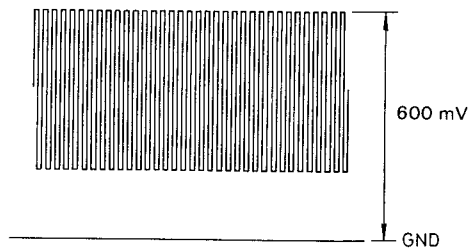


Fig. 8

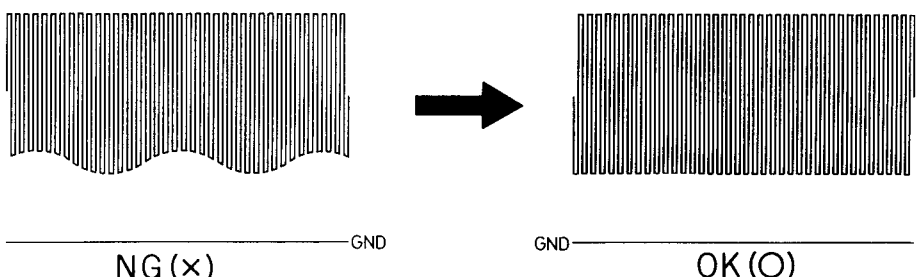


Range: 1 msec/div.

Fig. 9

4-(2) Tracking servo offset adjustment

(1) Adjusting instrument
Oscilloscope
(2) Adjustment method
1) Connect the oscilloscope between TP-11 (TDET) and TP-G (GND).
2) Insert a disc into the player and put it in play mode.
3) Adjust R103 untill the EFM signal is at its greatest amplitude without disorderd wave.



Range: 1 ~ 10 msec/div.

Fig. 10

4-(3) Focus servo offset adjustment

(1) Adjusting instrument
Oscilloscope
(2) Adjustment method
1) Connect the oscilloscope between TP-11 (TDET) and TP-G (GND).
2) Insert a disc into the player and put it in play mode.
3) Adjust R102 until the EFM signal is at its greatest amplitude.
4) Check the Auto Focus error signal of TP-4 is minimized.

4-(4) Focus servo gain adjustments

(1) Adjusting instruments
Signal generator, 2channel Oscilloscope and CR filter (Provided filter).
(2) Adjustment method
1) Connect the signal generator, oscilloscope and CR filter as shown below.

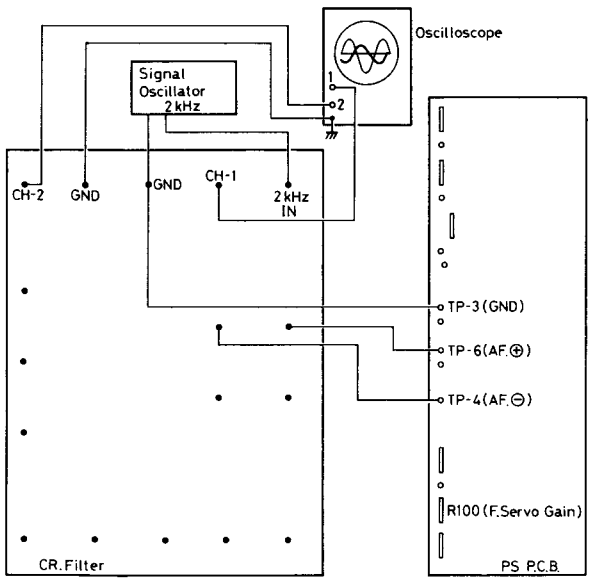


Fig. 11

2) Set the frequency of signal generator to 2 kHz. Adjust the output of the signal generator untill it is 800 mVp-p (283 mVrms).
3) Insert a disc into the player and put it in play mode.
4) Adjust R100 until the wave from on the oscilloscope becomes as difference of 135° as shown below.

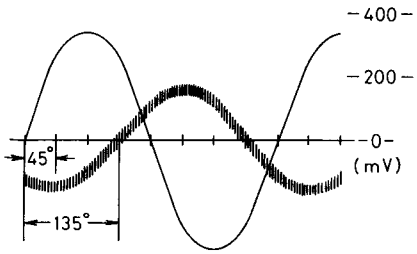


Fig. 12

4-(5) Tracking servo gain adjustment

(1) Adjusting instruments
Signal generstor, 2channel oscilloscope, 5 V DC power supply, CR filter
(2) Adjustment method
1) Connect the signal generator, oscilloscope, DC power supply and CR filter as shown below.

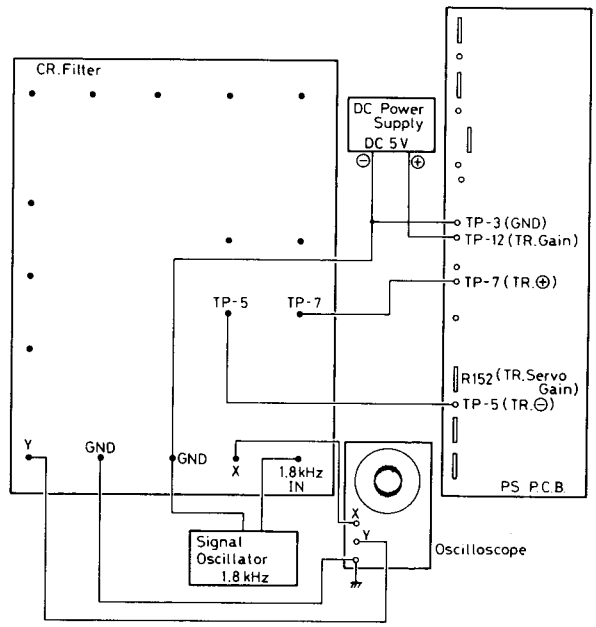


Fig. 13

2) Set TP-12 (TR. Gain) + 5 V in relation to TP-3. (Use a 5 V power supply.)
3) Adjust the frequency of the signal generator to 1.8 kHz and the output until it is 400 mVp-p.
4) After turning the power switch off, turn it back on agian.
Then, insert a disc into the player and put it in play mode.
5) Adjust R152 untill the resurge graph on the oscilloscope looks like the correct example as shown below.

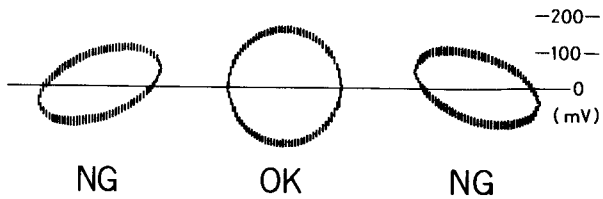


Fig. 14

Note:
If the above gain adjustments are hard to be done, refer to 6-(2) on page 22.

4-(6) Disc motor hall gain and offset adjustment

(1) Adjusting instruments
2-channel oscilloscope, CR filter

(2) Adjustment method

1) Connect TP-9 (DMCA) to one channel of the oscilloscope, and TP-10 (DMCB) to the other channel. Connect TP-8 (DM GND) to the GND terminal.

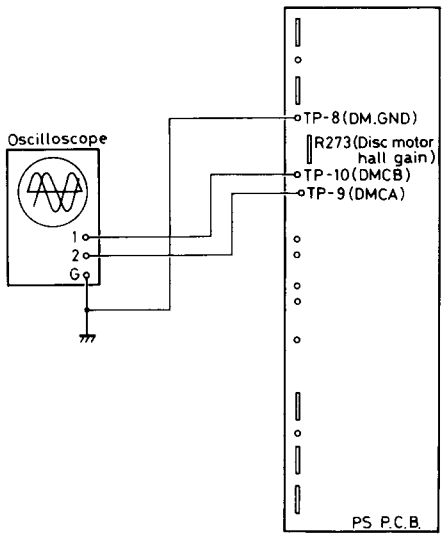
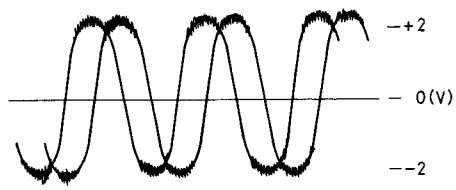


Fig. 15

2) Insert a disc into the player and put it in play mode. Adjust R273 so that the output level of TP-9 and TP-10 are the same (adjust so that the amplitude of each wave form is identical).



TP-9 and TP-10 Output
DC Range : 10 msec / div.

Fig. 16

3) Connect TP-9 (or TP-10) and TP-8 via the CR filter to the oscilloscope.
Caution: When connection is done via the CR filter, TP-9 and TP-10 cannot be connected at the same time.

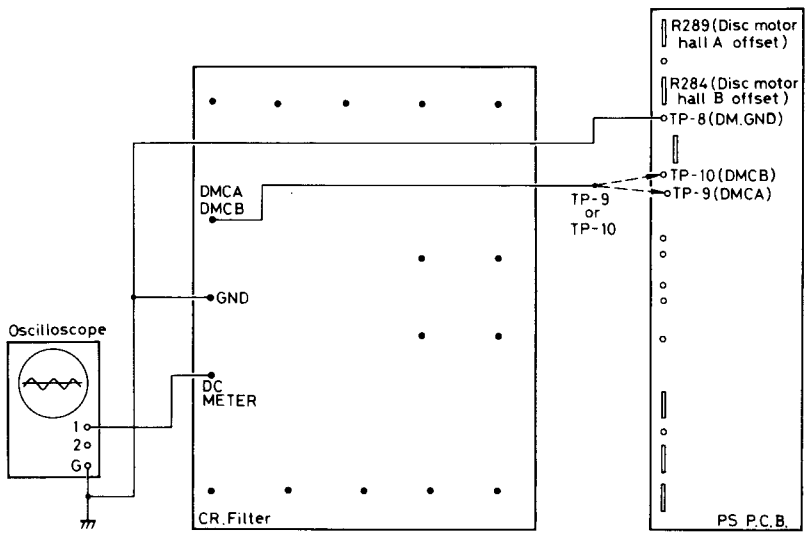
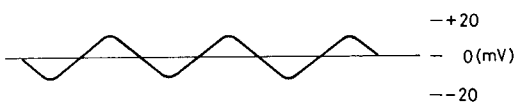


Fig. 17

4) Adjust R289 and R284 so that the offset voltage of TP-9 and TP-10 are 0 (adjust so that the DC offset voltage of each wave form is 0).



TP-9 or TP-10 Output
DC Range : 10 msec / div.

Fig. 18

Notes:

1. **If the adjustments are wrong,**
   - **① Output sound may be muted or disturbed frequently.**
   - **② Disc index is not detected.**
2. **After the adjustment please confirm that the error level on TP-7 (TC1 on PD P.C. Board) which is below 100 pulses per second using pulse counter.**

4-(7) DAC initial adjustment

(1) Adjusting instrument
Pulse counter (with a reset button).

(2) Adjustment method
1) Connect the pulse counter.
2) Do the adjustment after letting it run for 10 minutes.
3) Adjust R403 so that the figure of the pulse counter is 254,000 ± 1,000Hz.
4) This adjustment should be carried out in the sequence as shown below.

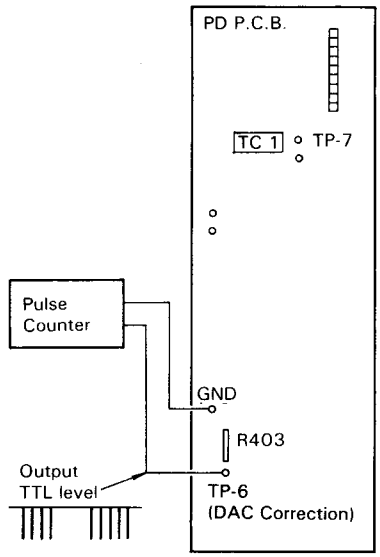


Fig. 19

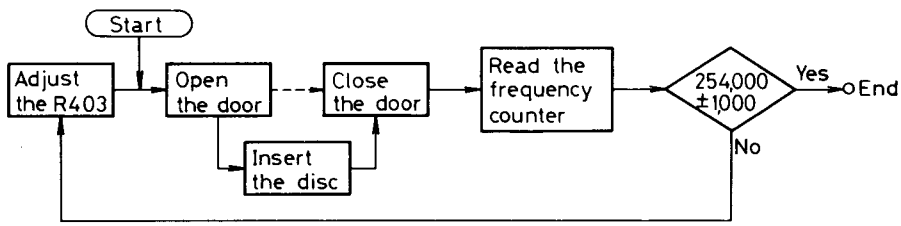


Fig. 20

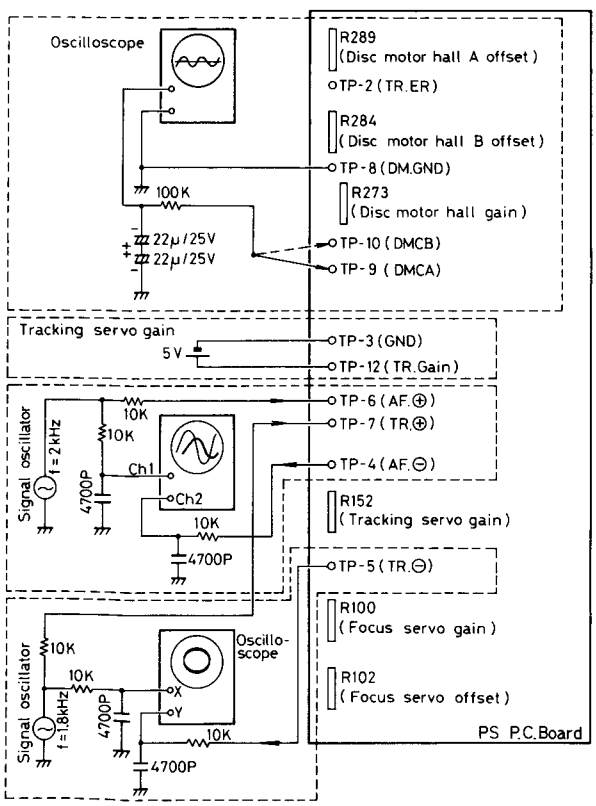


Fig. 21

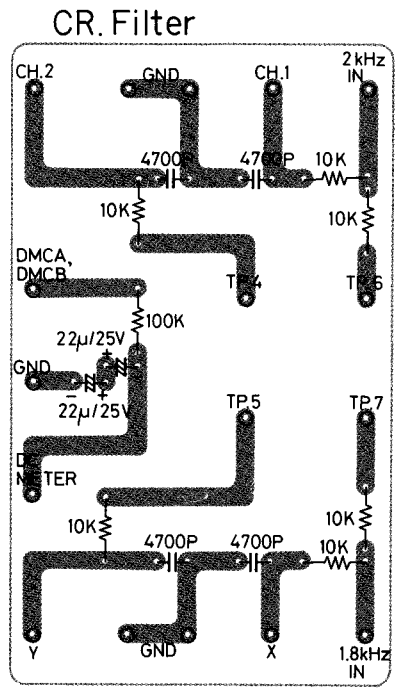


Fig. 22

5. Adjustment Procedures (Mechanical Section)

5-(1) For mounting the door ass'y

When mounting or dismounting the door ass'y, loosen the crank of the gear motor with a hexagonal wrench (1.5 mm) first.

(1) Fix the door ass'y provisionally to the unit base with L arms.

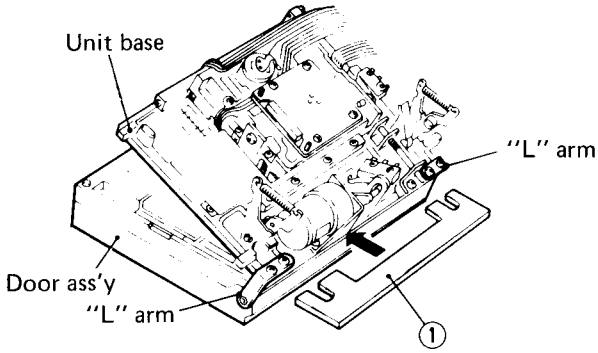


Fig. 23

(2) Tighten the four screws using jig ① as shown below. In this case, check that the opening between the door ass'y and the unit base is uniform (about 1.5 mm) from side to side.

(3) If not, correct it by putting plain washers (WSS3000) or similar between the unit base and the L arms.

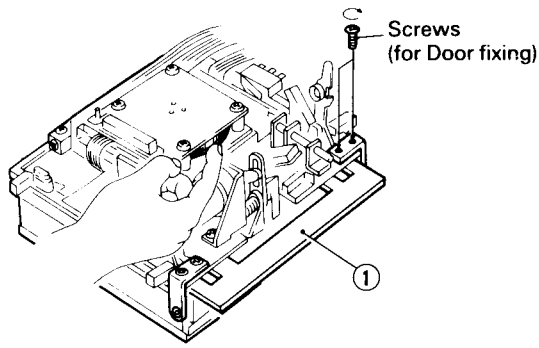


Fig. 24

5-(2) Adjusting the door ass'y opening angle

(1) With the door open, put a scale, etc. on the unit base as shown Fig. 25, and adjust the adjustment screw so that the microswitch turns ON in a range of 62-64 mm. Then, retain this switch ON position.

(2) Check that, with a disc put in the door ass'y, the separation between the center hole of the disc and the upper edge of the door is 6-11.5 mm.

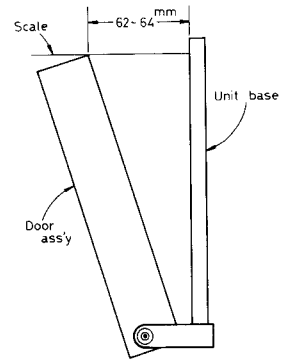


Fig. 25

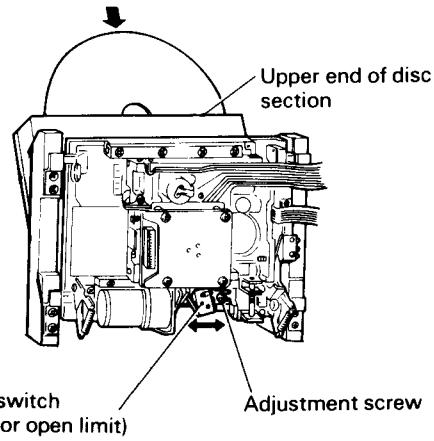


Fig. 26

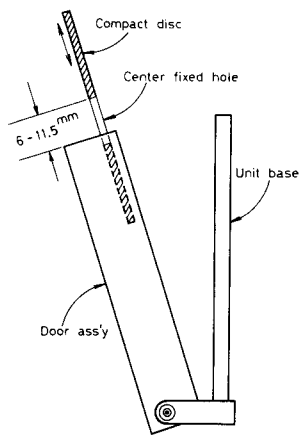


Fig. 27

Notes:

1. **When the door opening angle is excessive, the gear motor is overloaded; when it is not sufficient, the door may hit on the bracket of the door open limit switch.**
2. **Even when the door opens, when the limit switch does not turn ON, the door closes in a few seconds.**

5-(3) For mounting the pickup ass'y

Do not remove the lower guide rail, because this guide rail keeps the standard operation of the pickup ass'y.

(1) Put the crossed roller ass'y in the V-groove of the lower guide rail.
(2) Mount the pickup in line with the lower guide rail. In this case, be careful not to let the crossed roller ass'y out of the groove.
(3) Put the cross roller ass'y in the V-groove of the upper pickup ass'y.

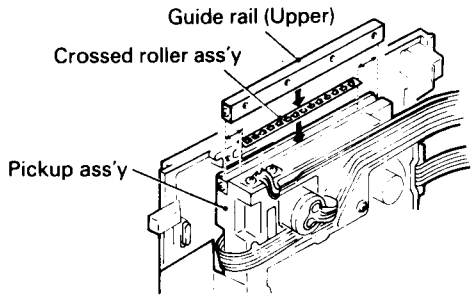


Fig. 28

(4) Remove the lid (cover for belt replacement), then mount the pickup ass'y with four screws while pressing the upper guide rail down as shown below.
(5) Check that the pickup ass'y does not chatter when moved by hand slowly. Chattering causes tracking error so that the pickup ass'y may return to the start point.

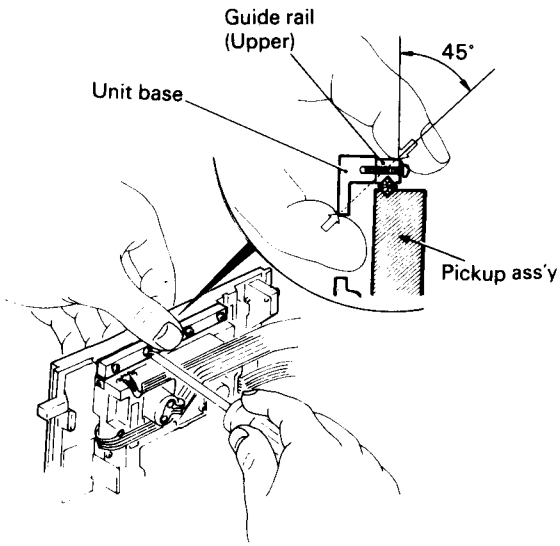


Fig. 29

5-(4) Adjusting the inner limit position of the pickup ass'y

(1) Insert a disc, and place the pickup ass'y at the outer side of the disc, then play the disc.
(2) Press the stop button to return the pickup ass'y to the start point.
(3) Check that the opening between the pickup base and the pickup inner stopper is about 1 mm with the pickup ass'y stopped at the start point.
(4) The ON timing of the limit switch varies according to the position of the adjustment screw.

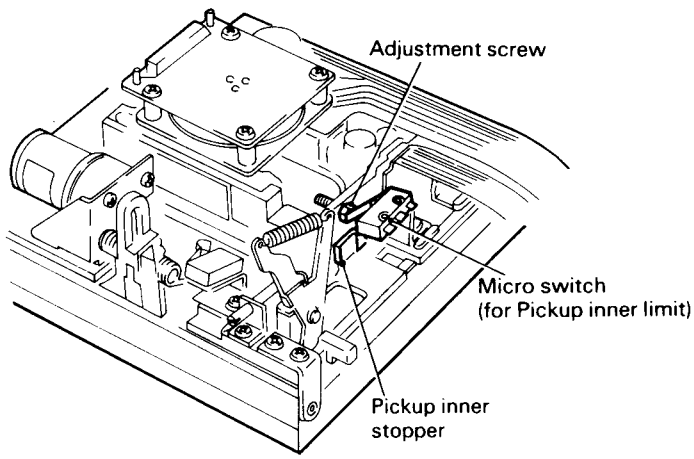
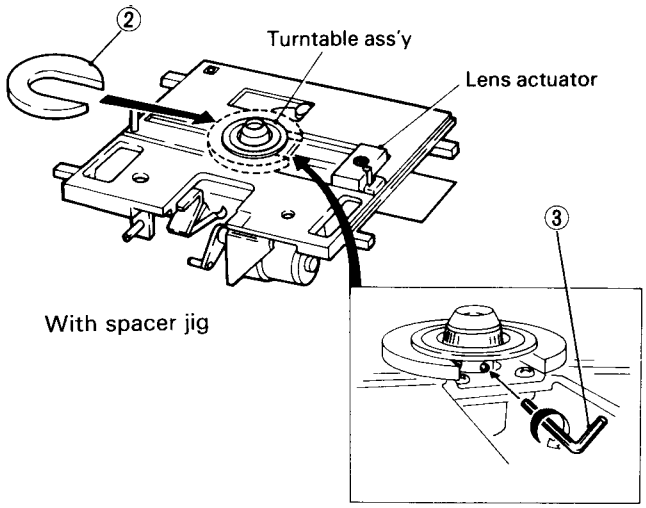


Fig. 30

Note:
When the adjustment screw is turned too far clockwise irrespective of the proper opening of about 1 mm, the pickup base touches the stopper before switch ON so that the pickup motor does not stop rotating.
Conversely, when the adjustment screw is too loose, the pickup may come off the track.

5-(5) Adjusting the turntable height

With spacer jig:
Set spacer jig (2) as shown below on the left, then secure the turntable ass'y with hex wrench (0.9 mm) (3).
Without spacer jig:
Secure the turntable ass'y at the position at which the difference in height between the lens actuator and the turntable is 0.5 mm $^{+0.1}_{-0}$ mm.



With spacer jig

Fig. 31

Without spacer jig

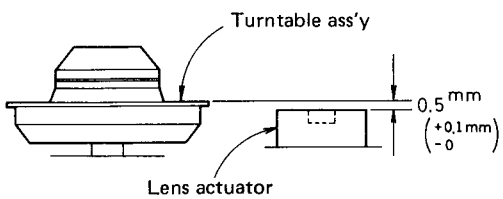


Fig. 32

Note:
When the turntable is below the actuator, the disc hits the actuator.
When the turntable is 1 mm or more above the actuator, the center position of the disc deviates, thus causing tracking error.

5-(6) Adjustment jigs and tool

When you need the jigs, consult with JVC.

① Door ass'y mounting jig
(Part No. : EGH4451801)

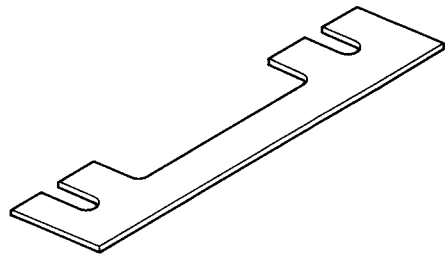


Fig. 33

② Turntable mounting jig
(Part No. : EGH4451791)

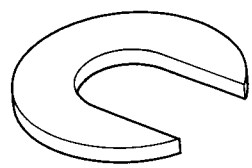


Fig. 34

③ 0.9 mm hex wrench
(Part No. : EGH4453341)

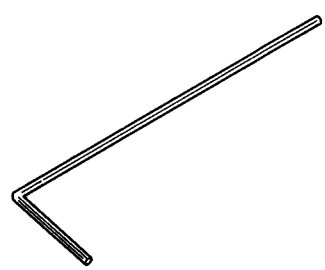


Fig. 35

④ CR filter
(Part No. : EBSJ1001)

⑤ Extension cord
(Part No. : EBSJ1002)

5-(7) Unit mechanism ass'y parts location

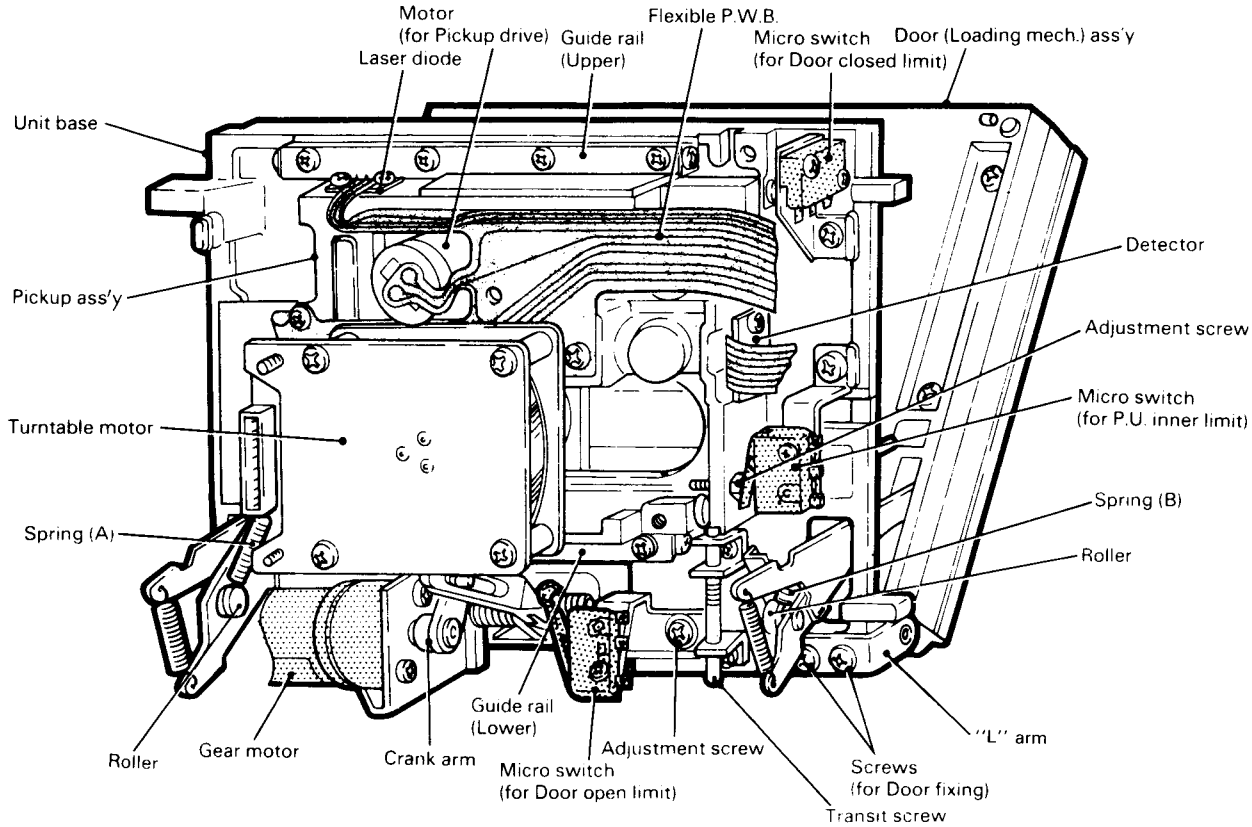


Fig. 36

5-(8) Unit mechanism ass'y service precautions

The mechanism section of this unit is precision-engineered and critically adjusted. Do not disassemble it beyond the minimum requirements. Especially the performance of the guide rail and disc motor mounting section may be impaired even by the intrusion of dust or other foreign matter.

NEVER DISASSEMBLE THE PARTS LISTED BELOW

(1) Lower guide rail
Serves as reference standard for pickup mounting dimensions.

(2) Optical parts; laser diode, detectors of pickup ass'y, lens actuator mounting screws
These parts are critically adjusted for optical alignment.

GENERAL PRECAUTIONS

(1) The mechanical parts are made of aluminium. Be careful not to overtighten screws, and do not scratch or bend the parts by exerting excessive force.

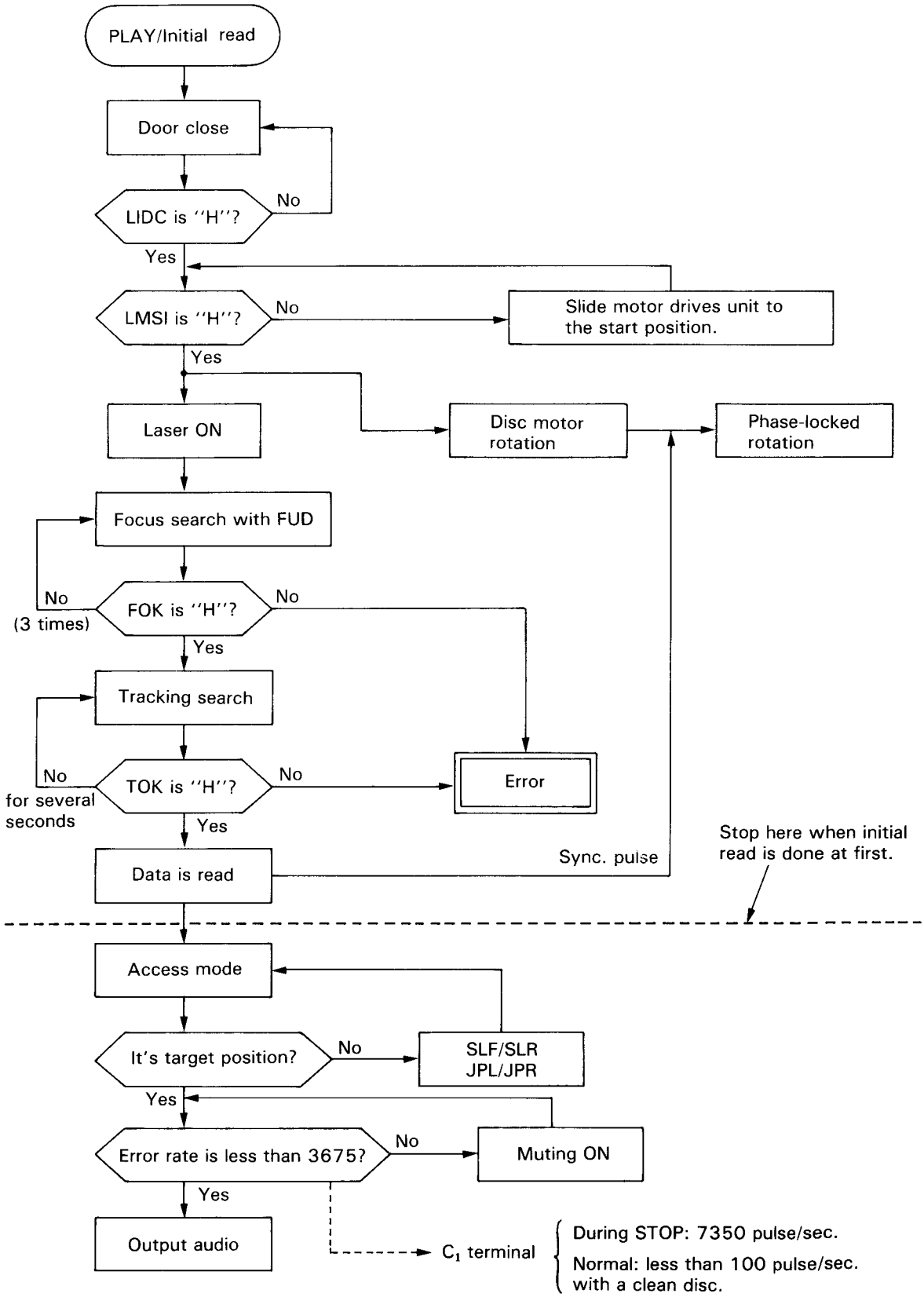
(2) The flexible board has sufficient rigidity, but as replacement of this part only is not possible, handle it carefully.

(3) Take care not to contaminate the objective lens of the lens actuator with dust or other particles.

DANGER-Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

6. Troubleshooting

6-(1) Outline of servo procedure when PLAY button is pressed.



6-(2) When Gaining Adjustments cannot be made

Some sets cannot be adjusted. ''Sound-cutting, sound jumping'' are produced from some specific discs.

Use bad disc
(For example YEDS1)

↓

Set both [TRG] and [AFG] to the 50% position mechanically. Connect the 2-channel oscilloscope to the TP-11 (200 mV/div.) and TP-4 (1 V/div).

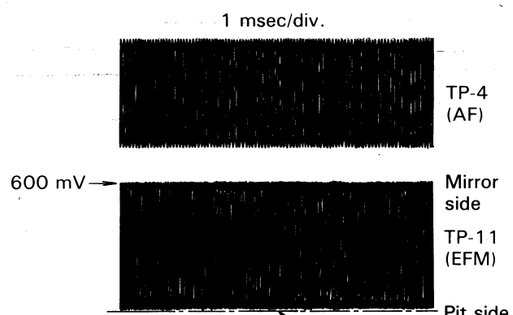
↓

Adjust the [LAG] and set the mirror side of the EFM to 600 mV.

↓

Adjust the [AOF], [TOF] until the EFM signal is at its greatest amplitude.
Smooth the discordered waves on the pit side.

← In this case smooth the pit side of the EFM signal first.



↓

- Adjust the [AFG] so that the waveform of the EFM signal is stable.
- When increased gain, noise is produced and the waveform becomes unstable.
- When decreased, the EFM signal goes out of order.

← In case of ordinary set, the TP-4 level also increases when the [AFG] is increases. They are in a direct proportionate relationship.

↓

- Confirm that the error rate of the TP-7 is maximum above 150.
- Confirm even with the last selection. The pulse rate is to be 7350 pulses per second when STOP mode.

→ OK (Normal)

6-(3) One Point Service Hints (Some hints on servicing)

Sound interception, distorted sound, selection impossible

↓

Is the EFM signal level in the 0.5 ~ 0.85 V range?

No → Adjust the [LAG] until the EFM signal level is 0.7 V. Follow the ''Adjustment Procedures'' on the previous page and adjust the [TRG], [TOF] and [AOF].

Yes ↓

Adjust the [TOF] and [AOF] so that the focus error signal of the TP-4 is at its minimum and that the pit surface of the EFM signal is levelled out as much as possible.

← Use claimed disc.

↓

Is the error pulse of the C1 (TP-7) below 100 pulses/sec.?

No ① → Follow the ''Adjustment Procedures'' on the previous page and adjust the [MOG], [MOA] and [MOB].

② → Carry out the trouble shooting procedure.
Confirm that the disc is not damaged.
If damage is observed, replace and readjust again.

Yes ↓

Confirm whether the C1 pulse on other discs is below 100 (in particular the last selection).

↓

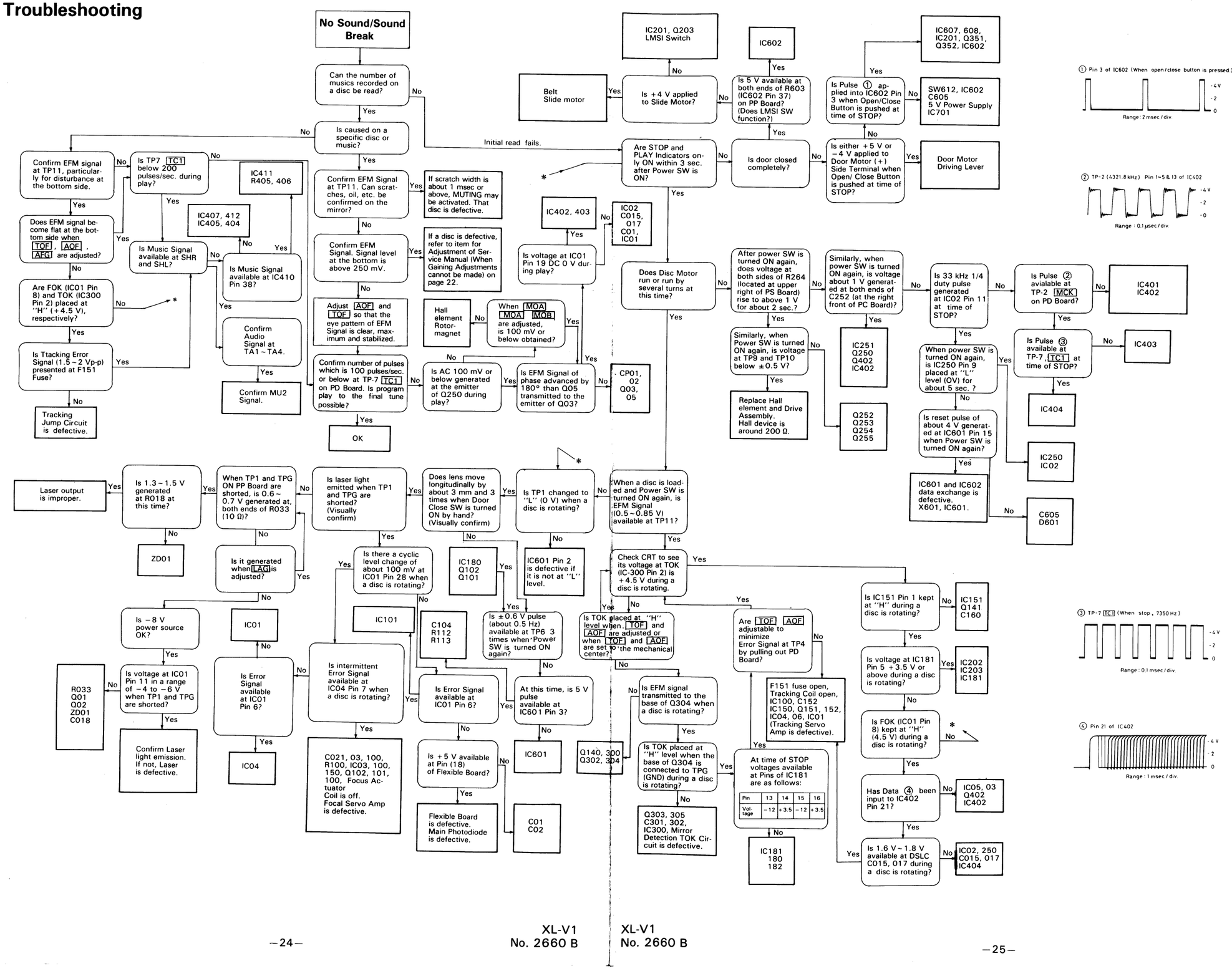
OK

The mechanism unit needs to be replaced only when the following items are all observed.

1 No EFM signal
2 Initial lead is not possible
3 Disc rotates
4 Electric current is flowing in the laser diode

XL-V1
No. 2660 B

6-(4) Troubleshooting


No Sound/Sound Break
Can the number of musics recorded on a disc be read?
Initial read fails.
Is caused on a specific disc or music?
Confirm EFM signal at TP11, particularly for disturbance at the bottom side.
Is TP7 TC1 below 200 pulses/sec. during play?
IC411 R405, 406
IC407, 412 IC405, 404
Does EFM signal become flat at the bottom side when TOF, AOF, AFG are adjusted?
Is Music Signal available at SHR and SHL?
Is Music Signal available at IC410 Pin 38?
Confirm Audio Signal at TA1~TA4.
Confirm MU2 Signal.
Are FOK (IC01 Pin 8) and TOK (IC300 Pin 2) placed at "H" (+4.5 V), respectively?
Is Ttacking Error Signal (1.5~2 Vp-p) presented at F151 Fuse?
Tracking Jump Circuit is defective.
Confirm EFM Signal at TP11. Can scratches, oil, etc. be confirmed on the mirror?
If scratch width is about 1 msec or above, MUTING may be activated. That disc is defective.
Confirm EFM Signal. Signal level at the bottom is above 250 mV.
If a disc is defective, refer to item for Adjustment of Service Manual (When Gaining Adjustments cannot be made) on page 22.
Adjust AOF and TOF so that the eye pattern of EFM Signal is clear, maximum and stabilized.
Hall element Rotor-magnet
When MOA MOA MOB are adjusted, is 100 mV or below obtained?
Confirm number of pulses which is 100 pulses/sec. or below at TP-7 TC1 on PD Board. Is program play to the final tune possible?
Is AC 100 mV or below generated at the emitter of Q250 during play?
Is EFM Signal of phase advanced by 180° than Q05 transmitted to the emitter of Q03?
CP01, 02 Q03, 05
OK
IC201, Q203 LMSI Switch
IC602
Belt Slide motor
Is +4 V applied to Slide Motor?
Is 5 V available at both ends of R603 (IC602 Pin 37) on PP Board? (Does LMSI SW function?)
Is Pulse ① applied into IC602 Pin 3 when Open/Close Button is pushed at time of STOP?
IC607, 608, IC201, Q351, Q352, IC602
SW612, IC602 C605 5 V Power Supply IC701
Are STOP and PLAY Indicators only ON within 3 sec. after Power SW is ON?
Is door closed completely?
Is either +5 V or −4 V applied to Door Motor (+) Side Terminal when Open/ Close Button is pushed at time of STOP?
Door Motor Driving Lever
IC402, 403
IC02 C015, 017 C01, IC01
Is voltage at IC01 Pin 19 DC 0 V during play?
Does Disc Motor run or run by several turns at this time?
After power SW is turned ON again, does voltage at both sides of R264 (located at upper right of PS Board) rise to above 1 V for about 2 sec.?
Similarly, when power SW is turned ON again, is voltage about 1 V generated at both ends of C252 (at the right front of PC Board)?
Is 33 kHz 1/4 duty pulse generated at IC02 Pin 11 at time of STOP?
Is Pulse ② avialable at TP-2 MCK on PD Board?
IC401 IC402
Similarly, when Power SW is turned ON again, is voltage at TP9 and TP10 below ±0.5 V?
IC251 Q250 Q402 IC402
Replace Hall element and Drive Assembly. Hall device is around 200 Ω.
Q252 Q253 Q254 Q255
When power SW is turned ON again, is IC250 Pin 9 placed at "L" level (OV) for about 5 sec. ?
Is Pulse ③ avialable at TP-7 TC1 at time of STOP?
IC403
IC404
Is reset pulse of 4 V generated at IC601 Pin 15 when Power SW is turned ON again?
IC250 IC02
IC601 and IC602 data exchange is defective. X601, IC601.
C605 D601
① Pin 3 of IC602 (When open/close button is pressed.)
-4 V -2 0
Range: 2 msec/div.
② TP-2 (4321.8 kHz) Pin 1~5 & 13 of IC402
-4 V -2 -0
Range: 0.1 μsec/div.
Laser output is improper.
Is 1.3~1.5 V generated at R018 at this time?
When TP1 and TPG ON PP Board are shorted, is 0.6~0.7 V generated at, both ends of R033 (10 Ω)?
Is laser light emitted when TP1 and TPG are shorted? (Visually confirm)
Does lens move longitudinally by about 3 mm and 3 times when Door Close SW is turned ON by hand? (Visually confirm)
Is TP1 changed to "L" (0 V) when a disc is rotating?
When a disc is loaded and Power SW is turned ON again, is EFM Signal (0.5~0.85 V) available at TP11?
ZD01
Is it generated when LAG is adjusted?
Is there a cyclic level change of about 100 mV at IC01 Pin 28 when a disc is rotating?
IC180 Q102 Q101
IC601 Pin 2 is defective if it is not at "L" level.
Check CRT to see its voltage at TOK (IC-300 Pin 2) is +4.5 V during a disc is rotating.
Is ±0.6 V pulse (about 0.5 Hz) available at TP6 3 times when Power SW is turned ON again?
Is TOK placed at "H" level when TOF and AOF are adjusted or when TOF and AOF are set to the mechanical center?
Are TOF AOF adjustable to minimize Error Signal at TP4 by pulling out PD Board?
F151 fuse open, Tracking Coil open, IC100, C152 IC150, Q151, 152, IC04, 06, IC01 (Tracking Servo Amp is defective).
Is IC151 Pin 1 kept at "H" during a disc is rotating?
IC151 Q141 C160
Is voltage at IC181 Pin 5 +3.5 V or above during a disc is rotating?
IC202 IC203 IC181
Is FOK (IC01 Pin 8) kept at "H" (4.5 V) during a disc is rotating?
Has Data ④ been input to IC402 Pin 21?
IC05, 03 Q402 IC402
Is 1.6 V~1.8 V available at DSLC C015, 017 during a disc is rotating?
IC02, 250 C015, 017 IC404
IC101
C104 R112 R113
Is intermittent Error Signal available at IC04 Pin 7 when a disc is rotating?
Is Error Signal available at IC01 Pin 6?
At this time, is 5 V pulse available at IC601 Pin 3?
IC601
Is Error Signal available at IC01 Pin 6?
IC01
Is Error Signal available at IC01 Pin 6?
IC04
R033 Q01 Q02 ZD01 C018
Is voltage at IC01 Pin 11 in a range of −4 to −6 V when TP1 and TPG are shorted?
Confirm Laser light emission. If not, Laser is defective.
C021, 03, 100, R100, IC03, 100, 150, Q102, 101, 100, Focus Actuator Coil is off. Focal Servo Amp is defective.
Is +5 V available at Pin (18) of Flexible Board?
Flexible Board is defective. Main Photodiode is defective.
C01 C02
Q140, 300 Q302, 304
Is EFM signal transmitted to the base of Q304 when a disc is rotating?
Is TOK placed at "H" level when the base of Q304 is connected to TPG (GND) during a disc is rotating?
Q303, 305 C301, 302, IC300, Mirror Detection TOK Circuit is defective.
At time of STOP voltages available at Pins of IC181 are as follows:
Pin 13 14 15 16
Voltage −12 +3.5 −12 +3.5
IC181 180 182
③ TP-7 TC1 (When stop, 7350 Hz)
-4 V -2 0
Range: 0.1 msec/div.
④ Pin 21 of IC402
-4 V -2 0
Range: 1 msec/div.

7. Schematic Diagram

PA P.C. Board (Audio Section)

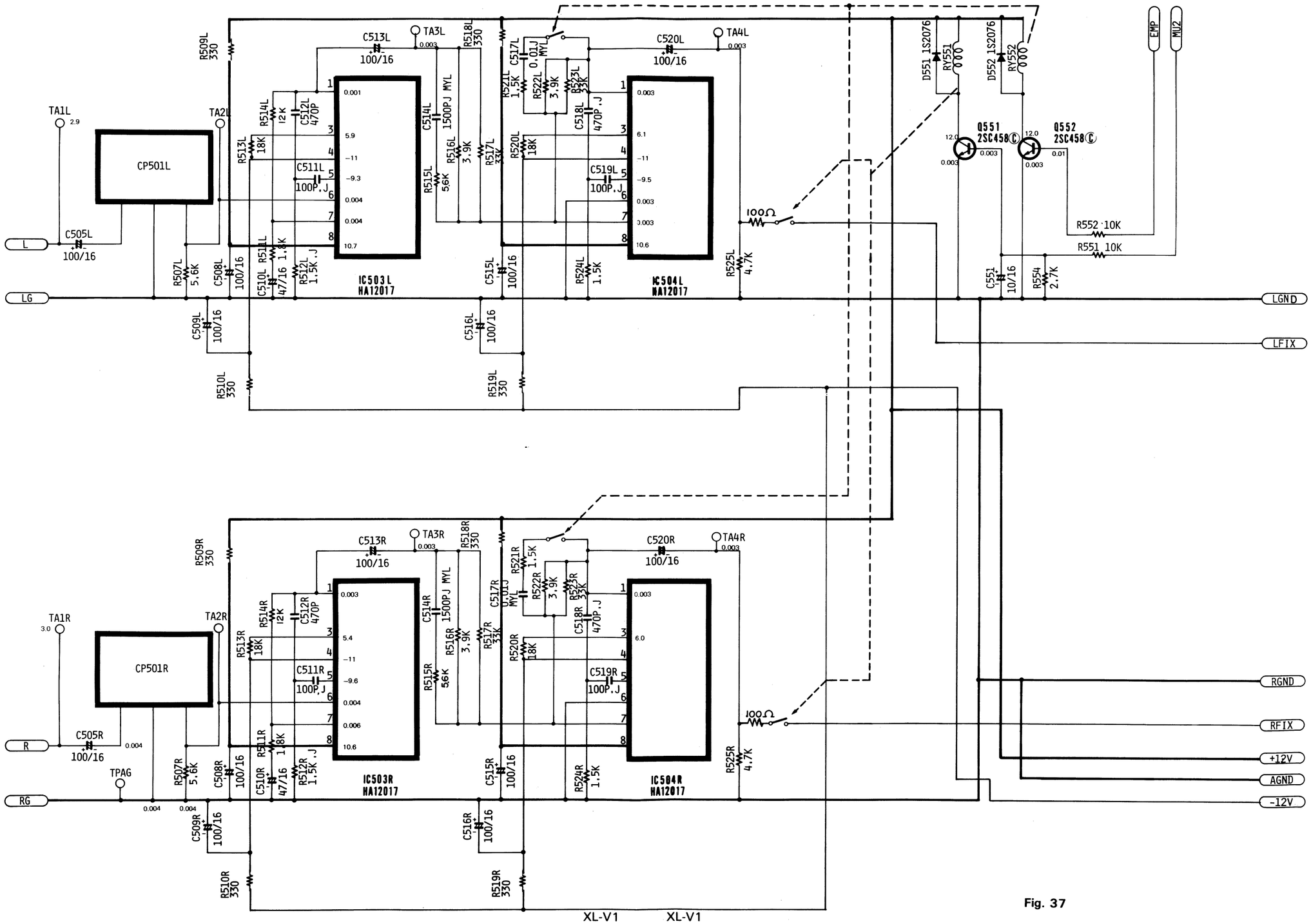


Fig. 37

XL-V1
No. 2660 B

XL-V1
No. 2660 B

PD P.C. Board (Logic Section)

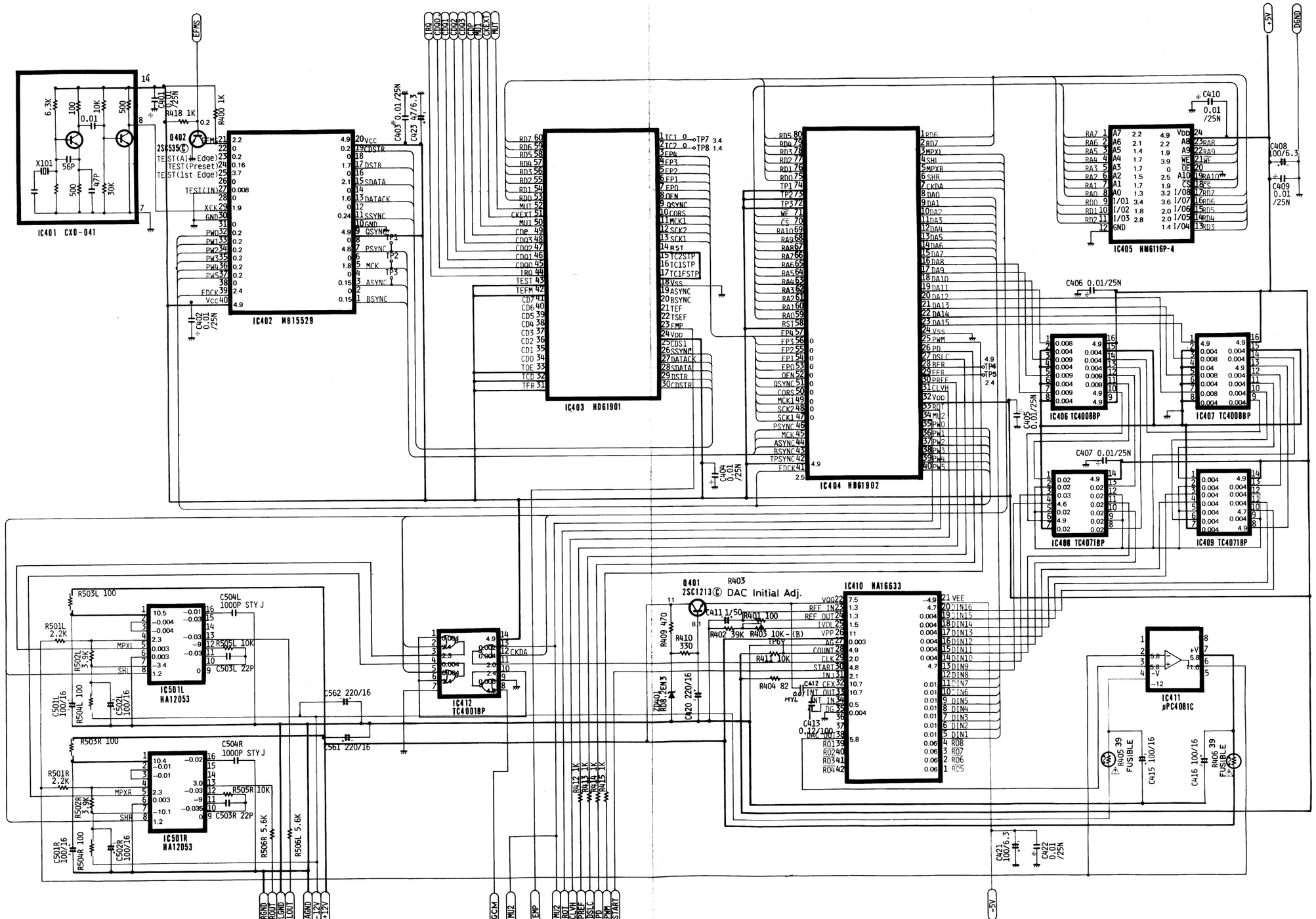


Fig. 38

PS P.C. Board (Servo Section)

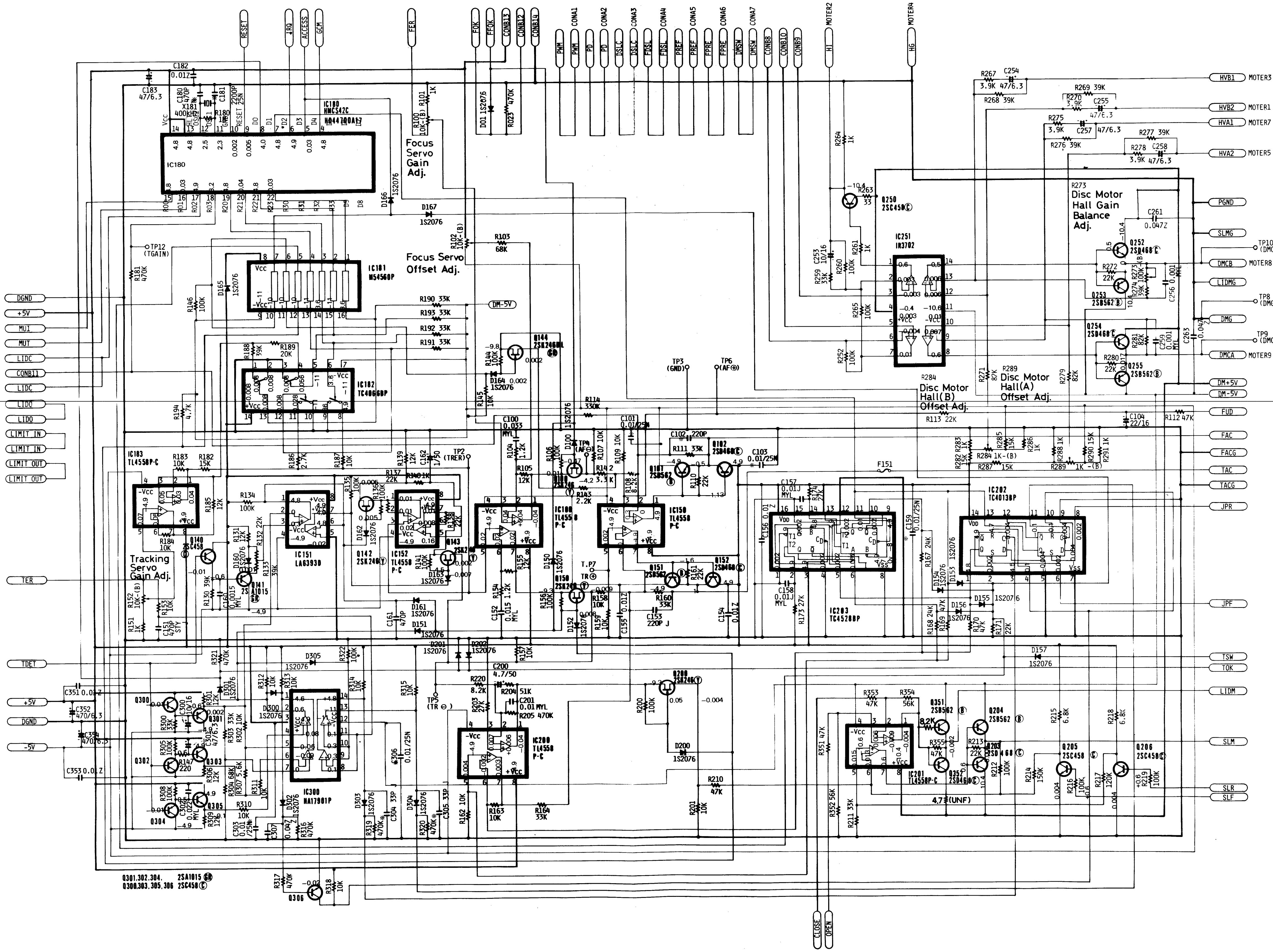

RESET
IRQ
ACCESS
GCM
FER
FOK
FFOK
CONB13
CONB12
CONB14
PWM
PD
DSLC
FDSL
PREF
FPRE
DMSW
CONB8
CONB10
CONB9
CONA1
CONA2
CONA3
CONA4
CONA5
CONA6
CONA7
HI
MOTER2
HG
MOTER4
IC180
HMCS42C
HD44700A17
IC181
M54560P
IC182
TC4066BP
IC183
TL4558P-C
IC151
LA6393D
IC152
TL4558
P-C
IC100
TL4558
P-C
IC150
TL4558
P-C
IC203
TC4528BP
IC202
TC4013BP
IC251
IR3702
IC200
TL4558
P-C
IC300
NA17901P
IC201
TL4558P-C
Focus
Servo
Gain
Adj.
Focus Servo
Offset Adj.
Tracking
Servo
Gain Adj.
R273
Disc Motor
Hall Gain
Balance
Adj.
R284
Disc Motor
Hall(B)
Offset Adj.
R289
Disc Motor
Hall(A)
Offset Adj.
TP12
(TGAIN)
TP2
(TRER)
TP3
(GND)
TP6
(AF⊕)
TP4
(AF⊖)
TP5
(TR ⊖)
T.P7
TR⊕
TP10
(DMCB)
TP8
(DMG)
TP9
(DMCA)
DGND
+5V
MU1
MUT
LIDC
CONB11
LIDO
LIMIT IN
LIMIT OUT
TER
TDET
-5V
DM-5V
HVB1
MOTER3
HVB2
MOTER1
HVA1
MOTER7
HVA2
MOTER5
PGND
SLMG
DMCB
MOTER8
LIDMG
DMG
DMCA
MOTER9
DM+5V
FUD
FAC
FACG
TAC
TACG
JPR
JPF
TSW
TOK
LIDM
SLM
SLR
SLF
CLOSE
OPEN
F151
4.7(UNF)
Q301,302,304. 2SA1015 GR
Q300,303,305,306 2SC458(C)

Fig. 39

PP P.C. Board (Preamplifier Section)

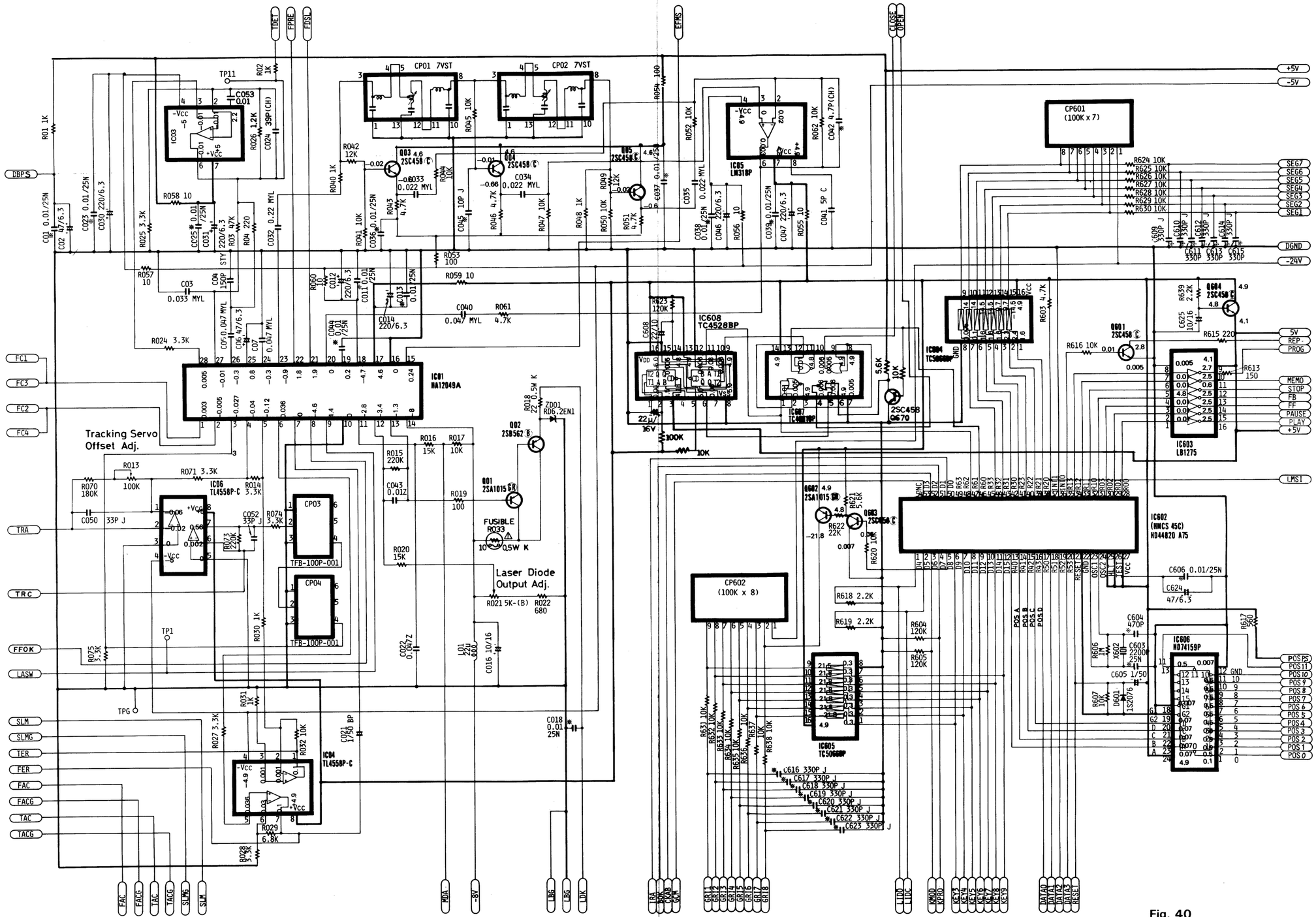


Fig. 40

PC P.C. Board (Base Section)

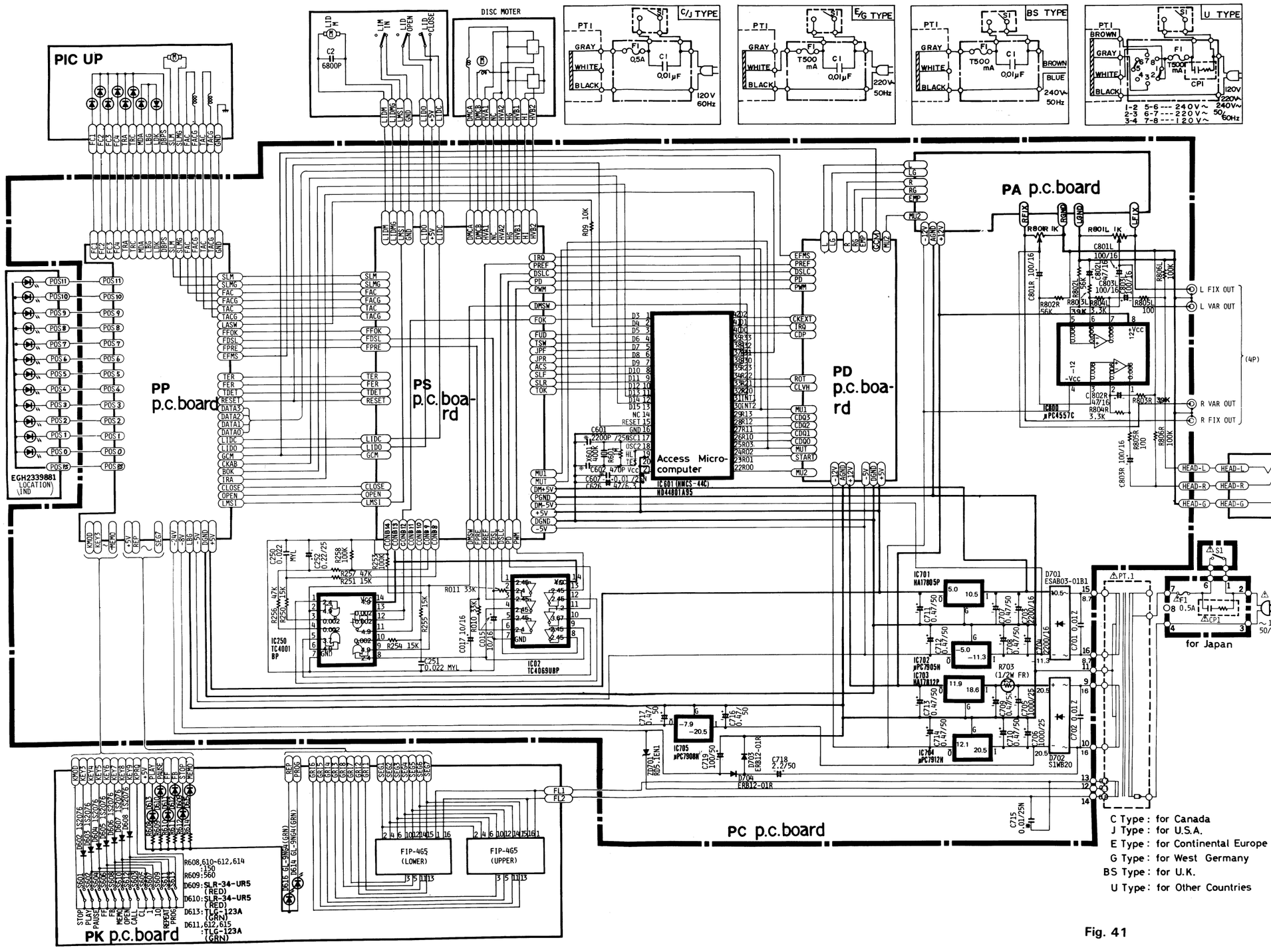


Fig. 41